The Builder.

No. CII.

SATURDAY, JANUARY 18, 1845.

THE society for obtaining baths and wash-houses for the labouring classes advertised, some time ago, for plans and estimates for erecting and fitting up the first establishment in London. Nearly a hundred architects, it is said, applied for the particulars; and the designs were sent in on Saturday last. It is unnecessary to say we shall look anxiously for the decision of the committee. We beseech them to reflect on the time and thought which have been expended on the production of these designs, and to decide fairly and honestly, *with especial reference to the instructions that were given to the competitors.* These instructions must be constantly before the committee during their examination. The plans in which they are complied with in the most perfect and satisfactory manner, should unquestionably be selected. We are so accustomed to find competitions managed badly and decided unjustly, that we can hardly bring ourselves to anticipate a better result in the present case. Feeling very strongly, however, on the subject, we call earnestly on each member of the committee to act as if the whole responsibility rested on himself. If they will do this—if they will decide as individuals open to question, and not with the feeling that they merge in the body, there will be little reason to cavil at their decision. As an incentive to such a course, they may be reminded that many eyes are upon them; and that by exciting an ill feeling against themselves in this respect, they would greatly injure the important object they have in view. Our readers may rest assured that we shall return to this subject when the plans are fairly before the public.

In the meantime we would make a few observations on the general question of baths and wash-houses, and urge the public to provide funds suitable to the greatness of the occasion.

The committee are anxious to carry out the plan on an extensive scale. They wish to begin with four model establishments in populous districts—three on the Middlesex side, and one on the Surrey side of the river, and they have advertised their desire to purchase land for sites. As yet, however, they have not received sufficient money to do all that is required, and we would gladly aid in obtaining it for them.

Assertions have been made that our poorer brethren will not avail themselves of the contemplated advantages when they are offered to them; that they prefer dirt to cleanliness; and various others equally unjust and libellous. The baths and wash-houses at Liverpool will of themselves afford sufficient answer to such statements. We can from them set facts against conjectures, and render unnecessary all querulous suppositions of what *may* take place by shewing positively what has occurred. We have recently visited the Liverpool establishment (in Frederick-street), in order to judge for ourselves, and were thoroughly satisfied with the result. It was there a mere experiment, and the establishment is very small. They have eighteen baths in three classes, for which the charge is respectively 1s., including the use of two towels, 6d. and 3d. with use of one towel. For cold baths the charge is 6d., 3d., and 2d., formerly 1d. In the first year 11,661 baths were taken, and in the second, 16,323; the majority being warm. The keeper informed us, that the average number of bathers in summer was from 100 to 150 each day. In winter the number is small. There is a vapour bath,—for which, with the use of three towels, 1s. is charged, but no plunging bath. The revenue last year, including the wash-houses, equalled the expenditure within 1*l.*, and this year will probably exceed it! In consequence of which and of the advantages found to result, Mr. Franklin, the town surveyor, has prepared plans for a second and more extensive establishment (including two plunging baths), which will be carried out immediately.*

The baths are open till 9 o'clock every evening in the week but Sunday; and on Saturday till an hour later. They are also open on Sunday morning from 6 till 8 o'clock in the summer, and from 7 till 9 in the winter. In these two hours on a fine morning, 50 or 60 persons usually avail themselves of the baths. In the London establishments there should be a proper place for the applicants to wait their turn, and it would be desirable if arrangements were made so that those persons who wished it might be shaved cheaply. There are many additional comforts that working classes might enjoy by co-operation, and gladly would we see them in the way of obtaining them. The labourer pays more for his cup of bad tea (when he gets it) than his more wealthy brethren do for good. With this, however, it is hardly our province to deal. The waiting-place should be decently fitted up, and if it were adorned with good prints, now so cheaply obtainable, might aid in improving the character of the visitants more powerfully than at first sight seems likely. Let us take them away for a time from their "coals and potatoes," hold up virtuous actions and heroic deeds for admiration, give them something to think about and talk about, and increase their self-respect.

Turning for an instant to the wash-houses: we found that the desire to avail themselves of these is even greater than of the baths, and that, although the establishment is not so extensively known in Liverpool as it ought to be, there were often more applicants than could be accommodated. There is room in the whole for twenty-six tubs, and these are usually all occupied. Each tub is furnished by pipes with hot and cold water, and has a plug by which it can be speedily emptied. There are two coppers to boil the linen, and a room heated by steam and fitted up with iron slides, termed there "maidens," to dry the clothes. The charge for the use of one tub from six till twelve o'clock is a penny, and for the whole day two-pence.

To those who have visited the abodes of the poor, the courts and alleys of great towns,—who have found a father, mother, and seven or eight children of different ages with only one small room for all purposes,—with, perhaps, a bed-ridden grandmother or sick child—it is unnecessary to point out the important boon which will be afforded to that class by the establishment of public wash-houses. In such a position cleanliness is out of the question; and moral degradation *must* follow its abandonment. To those who have not seen it we would say, think on the fact that *thousands* of families are in this state, and worse, and you must recognize the value of the endeavours now being made, and will feel disposed to assist them. The establishment of public wash-houses will at once improve considerably the dwellings of a very numerous class.

In the arrangement of the plans about to be submitted much attention must be given to questions extra-architectural; such as the supply of water to the baths and mode of heating it, construction of the drying-rooms, heating and ventilating the apartments, &c. To these we shall recur anon.

* The site chosen is in Paul-street, a poor and crowded part of Liverpool.

DOINGS UNDER THE METROPOLITAN BUILDINGS ACT.

THE official referees are active in their vocation. The subject of buildings commenced before the 1st of the present month, particularly alluded to in our leading article last week, is receiving special consideration. On the 19th of December last they issued a circular to the district surveyors, requesting them to make a return, as early as possible after the 1st inst., of all buildings commenced before that day and then unfinished, distinguishing the classes and rates and the respective situations of such buildings. On the 3rd inst. they sent out another circular with reference to the last, wishing to know to what height from the base of the footings such buildings had been carried on the 1st, and asking information of any circumstances respecting them which the surveyors might think necessary. It had been represented to them, the letter stated (and it is true enough), that, "in some cases, mere trenches have been excavated with nothing in them; in others, a skimming of concrete is laid in the trench; in some, a course of clinkers merely, and in others, a single course of bricks. In others, again, a foundation is put in to only part of the walls, without its being continued so as to be united at the back or ends;" and they wished to know, as early as possible, the number of buildings in such or similar circumstances. How they will decide in such cases, should the question of exemption or otherwise come before them, remains to be seen, but is not very doubtful.

One of the earliest, if not the first, application to a magistrate under the new Act, was made at Lambeth, on the 10th inst., when Mr. Southby, firework-manufacturer, applied to the Hon. Mr. Norton, to solicit his interference to prevent the erection of a varnish-manufactory near his premises. Mr. Southby said if the building were permitted it would be highly dangerous, and a serious loss of life might ensue from the combustible materials. The building was within 50 feet of his premises. There was also a great deal of timber in an adjoining yard, and should an explosion take place the consequences would be frightful.

Mr. Norton said the person had clearly no right to erect such a building, and asked if there was a public way?

Mr. Southby stated there was.

Mr. Norton immediately sent an officer of the court, with the applicant, to inform the person that he must discontinue the building, and that, under the 54th clause of the new Building Act, he was liable to a penalty of 50*l.* per day, every day the business was carried on, and, in default of payment, was liable to be sent to the House of Correction for six calendar months, with hard labour.

The official referees have adopted a measure which is likely to be exceedingly useful, namely, lithographing the correspondence from and to certain surveyors on matters connected with the new Act, and transmitting a copy to each district surveyor, for his instruction and guidance. The Act, from its complicated nature, is as yet but little understood by either surveyors or builders,* and, in order to spread information on the subject, we propose to give our readers the substance of each case as it occurs.

* Many of the builders and zinc-workers have been astonished at the interference of the district surveyor when erecting a funnel or smoke-pipe on a chimney-shaft! Nevertheless, he would seem to be justified; if it be 4 ft. above the brickwork, notice must be given of such work, and the fee paid, or the penalty may be incurred. See Sect. 13, and Sched. F, Art. Chimney-pots, tubes, &c.

Mr. Browne, surveyor of the Greenwich district, made a complaint against Mr. James Williams for a certain alleged illegal "projection of a shop-front, and cellar-flap and way," but having omitted to state all the grounds and particulars of his objection, and the particular parts of the new Act to which the said works were not conformable, he was advised, by the official referees, to do this, "by means of a drawing, sketch, or outline, with explanatory observations." The following is then added, and as it is highly important to all classes to know that the referees never intend to make a survey, *without charging for it*, we reprint it at length:—

"You will at once perceive, that it is of importance that the parties who make a complaint, or refer a matter to the official referees for their determination, should state the complaint, or the matter referred, with a fair degree of certainty, in order that they may be enabled to judge of it without the expense of a personal survey, which may be avoided, and in order that the opposing party may be fairly informed of the subject-matter of the complaint or reference." The letter concludes with a little wholesome advice to Mr. Browne not to interfere in an irregular manner.

The same gentleman also made a complaint against Mr. John Hiscock, for an irregular projection before a line of houses, but it was referred back to him for the "grounds and particulars of his objection," as in the last case.

Mr. Badger, of Lewisham, complained of Mr. John Godwin, for erecting some cottages contrary to the Act, but as the buildings in question were carried up to a considerable height before the 1st inst., they were deemed by the official referees to be "already built," and not within the operation of the Act. Mr. Badger imagined that as they were being built by contract they came within the meaning of the 9th section, which directs such contracts to be so modified that all buildings may be erected according to the provisions of the Act, but this of course only applies to buildings commenced *since* the 1st of January.

Mr. Sibley, of Clerkenwell, having mixed up with his return of buildings in progress on the 1st inst., an allusion to the dangerous state of St. John's Gate, erected several hundred years ago, representing that the decaying stone fell on the public way, received a request that his communications might be made "formally in future," and directions that he would make a survey of the building, with a view to its repair, under the 40th section. Mr. Sibley, we believe, has not yet made his report, and until then the official referees cannot take any steps for the abatement of the danger.

Mr. Baker, of St. Pancras, likewise received authority from the official referees to survey the scene of the late calamitous fire in Guildford-street, they having received information from another party that the walls were in a dangerous state. The case being urgent, Mr. Baker lost no time in serving the notice required by the 24th section upon Mr. Farey, the lease-holder; he was accompanied in his survey by that gentleman's son, who so narrowly escaped from the fire, and the report and certificate were at once drawn up and transmitted to the registrar. The purport was, that a hoard would be useless, as the front of the house might be blown down right across the street, but that it was necessary, for the safety of the public, immediately to pull down the front as low as the stone balcony, inclusive, and also the rear-front to the level of the ground-floor, shoring up the walls which would be left standing. The official referees have to send a copy of such certificate to the overseers of the poor, and the latter again have to write to the owner of the building to repair or pull down "within fourteen days."

The whole regulations respecting ruinous buildings seem rather complicated. The 40th section takes the matter in hand, but instead of giving some simple directions, refers to the 24th section, which is a mass of regulations about the survey and condemnation of party-walls, and contains a form of notice which is not strictly applicable in both cases. Time will, however, simplify these points.

In another part of the journal we present in a tabular form a list of all the district surveyors and their offices, the names and address of the official referees and registrar, and an abstract of those portions of the Act which relate to the notices required from builders.

INSTITUTION OF CIVIL ENGINEERS.

JANUARY 14, 1845.—The President in the chair.

The first meeting of the session of 1845 took place on Tuesday evening, the 14th inst. We noticed that some further improvements had been effected in the comfort and decorations of the rooms of the society. The collection of portraits has been augmented by that of Mr. Walker (the president), which was painted by J. P. Knight, R.A., last year for the members of the institution. The model gallery has also received some interesting additions.

The first paper read was on the different modes of confining railway bars in their chairs, by Mr. W. H. Barlow, resident engineer on the Midland Counties Railway. Of the numerous methods which have been tried for keying the rails in the chairs, it would appear that the one now most generally practised is that of parallel compressed wooden keys, but even to these Mr. Barlow states several objections, which, in his opinion, counterbalance the advantage of their elasticity and tendency to assume their original dimensions when exposed in a damp atmosphere. Being of small dimensions and placed just at the surface of the ballast, they decay rapidly; they swell and shrink with every change of temperature, thus becoming loose in dry weather, and requiring constant driving up, which soon destroys them. On the Midland Counties Railway the duration of the wooden joint keys has not exceeded five years, and at the present price of compressed keys, which varies from 8*l.* to 12*l.* per thousand, the expense of renewal of keys per mile per annum at the latter rate would be 10*l.* 2*s.* 6*d.* for a line with 3 feet bearings, and 8*l.* 9*s.* with 3 feet 9 inches bearings. This induced Mr. Barlow to try hollow wrought-iron keys made like the Russel gas-tube, but of such a form as to bear equally against the jaw of the chair, the middle web of the rail, and the top and bottom flanches. This form and substance it has been found gave great stability, held the rails firmly in their places, and yet possessed such elasticity as to neutralize the effect of the travelling of the wheels over the chairs, and rendered the motion of the carriages peculiarly smooth and agreeable. A number of experiments were given, wherein the great superiority of these keys, in their inherent qualities and their cost, over all other kinds was satisfactorily shewn. They have now been used for a considerable period on the Midland Counties, the South-Eastern, the Warwick and Leamington, and other railways; and in the discussion which ensued, several engineers expressed themselves so well pleased with them, that they intended to introduce them in all their new works.

A paper, by Mr. John Storey, described an oblique bridge of freestone over the river Gaunless, on the Hagger Leases Branch Railway. This bridge is remarkable for the acute angle (27°) which it forms with the line of the river it spans; and from its having been built so long ago as the year 1830, when that kind of construction was but imperfectly understood and but little practised in England, the square section of the arch is 19 feet, while the length of the face of the arch, in consequence of its extreme obliquity, is 42 feet. The paper described the mode of setting out the work and of executing the masonry; they were not so theoretically correct as the methods now practised, but the practical effects were stated to be good, as after the centres were struck, the crown of the arch did not drop half an inch, and no subsidence has been since observed in any part of the work.

The meeting was adjourned until the 21st instant, when the annual general meeting will be held for the election of the council and officers for the ensuing session. A considerable change is contemplated.

PURE OIL FOR MACHINERY.—Owing to the impurities which oils contain in their natural state, such as mucus, or albumen, and which act like yeast in promoting chemical action, most of them, when kept, become rancid. To obviate the difficulty this causes to philosophical instrument-makers and engineers, Messrs. Lundholm and Co. have produced a new oil, called pure Elaine, which seems worthy of trial.

ROYAL INSTITUTE OF ARCHITECTS.

ON Monday evening, the 13th instant, the Institute met in their new rooms for the first time, George Smith, Esq., vice-president, in the chair. Thanks were voted to Messrs. Mair, Scoles, and Thompson, and to the honorary secretaries, for their services in effecting the removal. Mr. C. N. Cumberlege was elected a fellow, and Messrs. Henry Peet and Edward F. Hutchins associates. The foreign secretary read an extract from a letter stating that the King of Prussia had purchased all the drawings and papers left by Schinkel, in order to preserve them intact.

Mr. Donaldson then laid before the meeting a brief view of the history of architecture, from the building of Babel, assumed to be 2249 years B.C., to the revival of Italian architecture in the 16th century, illustrated by a beautiful series of drawings. The chief object of the lecture was to point out the connection which existed between the architecture of the various countries of antiquity. Egypt, Greece, Italy, and Byzantium were each alluded to, and the rise of Christian architecture pointed out. The lecturer considered that the pointed arch came to us from the Saracens, and read some extracts from M. Guizot's "History of Civilization in Europe," to shew the effect of the crusades on arts and manners in this quarter of the globe.

Some clever sketches of Athenian and other Greek monuments, recently made by Mr. George Knowles, were exhibited; and a coloured copy of Mr. Lewis Gruner's elaborate work on the fresco decorations and stuccoes of buildings in Italy.

SOCIETY OF ANTIQUARIES.

AT a meeting of this society, held on Thursday, the 9th instant, Mr. Henry Hallam, the historian, in the chair, Mr. Albert Way exhibited an ancient altar-cloth from Steeple Aston Church, Oxon. A letter from M. de Caumont, of Normandy, was read, soliciting subscriptions for a statue of William the Conqueror, proposed to be erected at Falaise, the place of his birth. The letter also stated that the French antiquaries would hold their annual congress at Lille in July next, and expressed a hope that they might be favoured with the presence of some members of the society.

A communication from Mr. Edward Richardson was read, describing a number of coffins, stone and lead, found in the circular part of the Temple Church, London. The lead coffins were attributed to the time of Henry III., the stone coffins might be earlier. An account of Old Sarum, by Mr. Hatcher, illustrated by a model, was also read.

We have received several communications complaining of the apathy which prevails in this ancient and respected society, and the little good it effects as compared with its powerful means and influential position. The chief cause of the evil seems to be, that its management is allowed to rest exclusively with a few individuals (excellent though they may be), and has become a mere matter of routine.

THE "STATUE OF WILLIAM IV."—The commemoration of the erection and inauguration of the statue of the "Sailor King," which has just been completed by Mr. Samuel Nixon, and is now placed on a pedestal at the termination of King William-street, at the point which faces London-bridge, was celebrated a few evenings since at the Adelaide Tavern, at the foot of the bridge, where, at six o'clock, a numerous assembly of the influential gentlemen of the wards of Bridge and Candlewick sat down to an excellent dinner. The chair was filled by Sir Chapman Marshall, who was supported on the right hand by Sir George Carroll (these two gentlemen being the aldermen of the respective wards), and on his left by Mr. Nixon. We are sorry that we cannot coincide in the flattering opinions of the statue which have been expressed. It is, to us, coarse and clumsy, and not likely to advance the reputation of the sculptor.

ROYAL ACADEMY.—Every academician was entitled to exhibit eight pictures each season, and for which, of course, the best places were retained. By a recent resolution they have now limited themselves to *six*. This alteration cannot fail to be gratefully received by the profession generally.

TABLE OF METROPOLITAN DISTRICT SURVEYORS.

Official Referees, JAMES WHITE HIGGINS, Esq., and WILLIAM HOSKING, Esq.—*Registrar*, ARTHUR SYMONDS, Esq.

Board of Examiners appointed to assist the Official Referees in the Examination of Candidates for the Office of District Surveyor, SIR ROBERT SMIRKE, JAMES PENNETHORNE, Esq., and THOMAS CUBITT, Esq.

All Communications are to be addressed under cover to the "Registrar of Metropolitan Buildings," 3, Trafalgar-square.

LIST OF SURVEYORS' DISTRICTS (OLD AND NEW) APPOINTED BY THE JUSTICES OF THE PEACE OF THE RESPECTIVE COUNTIES, PURSUANT TO THE ACT 7 & 8 VICT., c. 84, WITH THE NAMES OF THE SURVEYORS, THEIR RESIDENCES, AND OFFICES.

DISTRICT.	SURVEYOR.	RESIDENCE.	OFFICE.
MIDDLESEX.			
CITY OF LONDON.			
EASTERN DISTRICT, containing the wards of Lime-street, Tower, Aldgate, Portsoken, Billingsgate, and Langbourne	Edmund Woodthorpe	30, Jewin-street, Cripplegate	30, Jewin-street, Cripplegate.
SOUTHERN DISTRICT, containing the wards of Bread-street, Bridge, Candlewick, Castle Baynard, Cordwainers, Dowgate, Farringdon Within, Queenhithe, Vintry, Walbrook, and Bridewell Precinct	George Smith		Frederick-place, Old Jewry.
WESTERN DISTRICT, containing the wards of Aldersgate Within and Without, Cheap, and Farringdon Without, St. Martin's-le-Grand, St. Bartholomew the Greater and Less, the Inner Temple, and that part of the Middle Temple within the City, the Serjeants' Inns, Fleet-street, and Chancery-lane, Clifford's-inn, Barnard's-inn, Thavies'-inn, and those parts of Furnival's-inn and Staples'-inn which are within the City	John Stevens	6, Clement's-inn, Strand	6, Clement's-inn, Strand.
NORTHERN DISTRICT, containing the wards of Bassishaw, Bishopsgate Within, Bishopsgate Without, Broad-street, Coleman-street, Cornhill, Cripplegate Within, Cripplegate Without	James Mountague	Upper Clapton, Middlesex.	Office of Works, Guildhall.
TOWER HAMLETS.			
Tower Liberty	J. B. Redman	11, Canton-place, East-India-road, Limehouse	48, Lime-street.
Stratford-le-Bow (St. Mary), and Poplar (All Saints)	J. H. Good, jun.	75, Hatton-garden	High-street, Bow.
St. George-in-the-East and St. Botolph Without, Aldgate	Henry Flower	14, North-buildings, Finsbury-circus	23, Prince's-square, St. George's East.
Limehouse (St. Anne), Wapping (St. John), St. Catherine, and the Hamlet of Ratcliff	Edmund Woodthorpe	30, Jewin-street, Cripplegate	London-street, corner of Pump-yard, Ratcliff.
Mile End, Old Town	John Davis	Devonshire-square, Bishopsgate-street.	1, Stepney-green, Mile-End-road.
Bromley (New)	John Blyth	113, Aldersgate-street	Bromley-house, near the Church, Bromley, Middlesex.
Hackney (St. John)	Thos. Henry Wyatt	75, Great Russell-street, Bloomsbury-square	Church-street, Hackney, corner of Baxter's court.
Bethnal Green (St. Matthew)	Edward N. Clifton	38, Cross-street, Islington	9, Tokenhouse-yard, Lothbury.
Spitalfields (Christchurch), Shadwell, and Hamlet of Mile End, New Town	Charles Hamor Hill	Canonbury-terrace, Islington	4, Brick-lane, Spitalfields.
Whitechapel (St. Mary)	William Grellier	20, Wormwood-street, Bishopsgate-st.	26, Wormwood-street, Bishopsgate-st.
Shoreditch (St. Leonard), and Norton Folgate Liberty	Robt. Warton, *Dep. Sur.* for Matthew Warton	Collingwood-place, Ratcliff	64, Old-street-road.
EDMONTON HUNDRED.			
Tottenham (New)	John Henry Taylor	22, Parliament-street	Warner's-terrace, Tottenham-high-cross.
FINSBURY DIVISION.			
St. Luke's, Finsbury, (Old-street), and Glass-House-yard	Richard C. Carpenter	99, Guildford-street, Russell-square	85, Goswell-street.
Islington (St. Mary), and St. Sepulchre Without	George Edwards	Duncan-place, City-road	3, Montague-place, Islington.
Stoke Newington	William Lovell	20, Swinton-street, Gray's-inn-road	45, Church-street, Stoke Newington.
Hornsey (New)	George Legg, (Sur. *pro. temp.*)	239, Maida-vale, Paddington	10, South-square, Gray's-inn.
Clerkenwell (St. James and St. John)	Robert Sibley	39, Great Ormond-street, Foundling	7, Penton-grove, Pentonville, and at res.
HOLBORN DIVISION.			
Saffron-hill Liberty, Hatton-garden, and Ely Rents; St. Clement Danes, and St. Mary-le-Strand, within the Duchy of Lancaster, and the Savoy precinct	Samuel Angell	18, Gower-street, Bedford-square	5, Hatton-garden.
Holborn-above-the-Bars (St. Andrew) and St. George the Martyr, and Liberty of the Rolls	George Legg	239, Maida-vale, Paddington	10, South-square, Gray's-inn.
St. Giles-in-the-Fields, and St. George, Bloomsbury	George Pownall	5, Gordon-square	14, Upper King-street, Holborn.
St. Pancras	Henry Baker	11, Upper Gower-street, New-road	11, Upper Gower-street, New-road.
St. Marylebone	John White	Westbourne-green, Paddington	Devonshire-place, north, New-road, Regent's-park.
Paddington	George Gutch	Bridge-house, Harrow-road	Bridge-house, Harrow-road.
Hampstead (New)	Henry Edw. Kendall, jun.	33, Brunswick-square	Crown-cottage, Haverstock-hill.
KENSINGTON DIVISION.			
Chelsea (St. Luke)	Samuel Beacheroft	83, Cadogan-place, Sloane-street	83, Cadogan-place, Sloane-street.
North Kensington (New)	Charles Beacheroft	11, Westbourne-st., Hyde-park-gardens	48, High-street, Notting-hill.
South Kensington (New)	Thos. Leverton Donaldson	7, Hart-street, Bloomsbury-square	3, Pelham-terrace, Pelham-road, Brompton.
Fulham (New)	Andrew Moseley	19, Keppel-street, Russell-square	High-street, Fulham.
Hammersmith (New)	James Charles Christopher	5, Serampore-terrace, Hammersmith	5, Serampore-terrace, Hammersmith.
WESTMINSTER CITY AND LIBERTY.			
St. Margaret and St. John, Westminster, and the extra parochial parts thereof	Jas. Howell, *Dep. sur.* for William Pilkington	1, Vincent-square, Westminster	1, Vincent-square, Westminster.
St. Martin-in-the-Fields, and St. Anne, Soho	Henry Edward Kendall	17, Suffolk-street, Pall Mall East	17, Suffolk-street, Pall Mall East.
St. George, Hanover-square	Edward Martin Foxhall	18, South Audley-street, Grosvenor-sq.	14B, South-street, Grosvenor-square.
St. James	James Gray Mayhew	35, Cambridge-terrace, Hyde-park	14, Argyll-st., St. James's, Westminster.
St. Paul, Covent Garden, St. Clement Danes, and St. Mary-le-Strand	Edward Chas. Hakewill	8, Thurloe-square, Brompton	8, Craig's-court, Charing-cross.
SURREY.			
Rotherhithe (St. Mary), and Hatcham, or the portion of St. Paul, Deptford, in Surrey	George Allen	69, Tooley-street, Borough	2, Monmouth-place, New-cross, Hatcham.
Bermondsey (St. Mary Magdalen), and St. John, St. Olave, and St. Thomas, Southwark	Robert Hesketh	13, Arundel-street, Strand	12, Bermondsey-square.
Lambeth (northern portion of), St. George, St. Saviour, and Christchurch, Southwark	David Roper	Great Coram-street, Russell-square	11, Stamford-street, Blackfriars-road.
Battersea (part of, lying north-west of South-western Railway), Lambeth (central division of), and Newington (St. Mary)	George Porter	Fort-place, Bermondsey	11, Kennington-row, opposite Kennington-common.
Lambeth (southern portion), and detached part of Streatham	William Rogers	St. Ann's-road, Brixton	St. Ann's-road, Brixton.
Camberwell (New)	William Crawford Stow	122, Long-lane, Bermondsey	1, Camden-place, near Camden-chapel, Camberwell.
Streatham (New)	John Mullins	5, St. John's-grove, Brixton-road	5, St. John's-grove, Brixton-road, and Streatham-place, Brixton-hill.
Clapham (New), and Battersea (part of, lying southward of the South-western railway)	Edward I'Anson, jun.	3, Church-buildings, Clapham-common	3, Church-buildings, Clapham-common.
Wandsworth, and Tooting Graveny	Alfred James Hiscocks	Cornbury-place, Kent-road	High-street, Wandsworth.
KENT.			
Deptford (St. Paul, in Kent, and St. Nicholas), (New)	Robt. Smirke Martyr	George-street, Greenwich	23, Broomfields, Deptford.
Greenwich (New)	Robt. Palmer Browne	Royal-place, Royal-hill, Greenwich	Royal-place, Royal-hill, Greenwich.
Woolwich (New)	George Aitchison	Muscovy-court, Trinity-sq., Tower-hill	Medical-hall, adjoining Hoff-wharf, High-street, Woolwich.
Lewisham (New)	Charles Robt. Badger	Blackheath-road, Greenwich	At Mr. Harris's (Parochial Tax-collector's), Lewisham-road, opposite the Anchor brewery.
Charlton, Lee, and Kidbrooke (New)	James Collis	2, Shaftesbury-terrace, Pimlico	Frederick-place, Tranquil-vale, Blackheath.

The Metropolitan Buildings-Act provides, that it shall be the duty of the Builder to give two days' notice to the District Surveyor at his office, in the terms specified in the forms contained in the schedule to the Act, under a penalty of 20*l.* and treble fees in each or either case, before the following acts or events, that is to say—Before any building shall be begun to be built; and also before any addition or alteration, which by this Act is placed under the supervision of the Surveyor, shall be made to any building; and also before any party-wall, external-wall, chimney-stack, or flues, shall be begun to be built, pulled down, rebuilt, cut into or altered; and also before any opening shall be made in any party-wall; and also before any other matter or thing shall be done, which by this Act is placed under the supervision of the Surveyor, except as thereinafter is provided.

If a building be suspended for any period exceeding three months, or if during the progress of a building the Builder be changed, then two days before entering on the performance of the work, such Builder must give notice to the Surveyor, under a penalty of 20*l.* §13.

If by reason of any emergency, any act, matter, or thing, placed under the supervision of the Surveyor, be required to be done immediately, or before notice can be given to the Surveyor, then it shall be lawful for the Builder or any person to do such act, matter, or thing so requisite, but upon this condition, that within forty-eight hours after beginning to execute such work, notice thereof be given to the Surveyor. § 13.

With regard to buildings of the first-rate of the warehouse class, and of all buildings of the public building class (except those especially exempted by the Act), notice must be given to the Official Referees by the Architect or Builder, when the walls of any such building have been built to their full height, and all the timbers of the floors, roofs, and partitions, have been fixed. § 15.

With regard to buildings specially named in the Act (schedule B.), the Architect or the Builder must give notice to the Official Referees before the building be commenced, and must transmit the plans and other drawings for their inspection. § 16.

LONDON AS IT WAS, AND IS.*

We commence our present narrative at that period when London was threefold afflicted with the terrible calamities of famine, pestilence, and fire. In 1663, and for some years previous, there was a general dearth throughout England, wheat being sold at the enormous price of 3*l.* 14s. per quarter, and malt at 2*l.* 2s. This was succeeded by the plague in 1665, by whose direful ravages 68,596 persons were swept away, which, together with the number of those that died of other distempers, made the bill of mortality of this year amount to 97,306 souls. The recurrence of this dreadful calamity, after an interval of forty years, worked upon the superstition of the age, and many began to impute the fatality to that number, as if in that sense the land was to have rest only forty years. Many ingenious conjectures have been made concerning the origin of this scourge, and from all the facts that can be collected in modern times, there is every reason to believe that it originated with the hot, poisonous blasts of the deserts of Persia, Arabia, and Egypt, and travelling into Europe, it occasionally committed great ravages in the chief cities, and was never wholly eradicated therefrom. During the calamitous period we are now speaking of, it was observed by Dr. Baynard, a very intelligent physician, that there was a general calm and serenity of weather, as though both wind and rain had been expelled the kingdom, and that for many weeks together he could not discover the least breath of wind, not even so much as to move a weathercock, and the fires in the streets were made to burn with great difficulty; the birds too, as in tropical regions, flew heavily on the wing, panting for breath.

In the history of nations we find very often a singular coincidence of events, surpassing human comprehension, and appearing almost miraculous: London furnishes a remarkable illustration of this; a few months only had elapsed, the houses untenanted by the plague had scarcely been opened to the new comers from the country, than they were turned out again by a disaster more sudden than the former. The great fire of London, which happened in the year 1666, broke out Sept. 2nd, at one o'clock in the morning, in Pudding-lane (near now Fish-street), in a quarter of the town closely built with wooden, pitched houses, and made such rapid headway under a strong easterly wind then blowing, that before daylight it became too great for any hopes of mastering it by the engines, or even for approaching within any reasonable distance. Many attempts were made to prevent the spreading of it by pulling down houses and making great intervals; but the fire, seizing upon the timbers and rubbish, soon passed the spaces, and continued its devastating progress the whole of Monday and Tuesday. On Tuesday night the wind slackened a little, and the flames meeting with brick buildings at the Temple, began to lose their force gradually on that side, and on Wednesday a stop was put to it at the Temple Church, near Holborn-bridge, Pye-corner, Aldersgate, Cripplegate, near the end of Coleman-street, at the end of Basinghall-street, by the postern at the upper end of Bishopsgate-street and Leadenhall-street, at the Standard in Cornhill, at the Church in Fenchurch-street, near Clothworkers' Hall in Mincing-lane, at the middle of Mark-lane, and at the Tower Dock.

Thus, after raging three days with the utmost violence, and in despite of the feeble efforts of the inhabitants to check its progress, it gradually ceased, after laying waste and consuming the buildings on 436 acres of ground, 400 streets, lanes, &c., 13,200 houses, the cathedral church of St. Paul, 86 parish churches, 6 chapels, the magnificent buildings of Guildhall, the Royal Exchange, Custom-house, and Blackwell Hall, several hospitals and libraries, 52 of the companies' halls, and a vast number of other noble edifices, 3 of the city gates, 4 stone bridges, and the prisons of Newgate, the Fleet, the Poultry and Wood-street Compters, the loss of which, together with that of merchandize and household furniture, by the best calculation amounting to ten millions seven hundred and thirty thousand pounds.

Without staying to inquire into the validity of the numerous reports handed down to us concerning the origin of the fire, which in these days are truly placed to the prejudices and bigotry of the age, we will proceed at once to notice the permanent benefits derived by the inhabitants of London from what was then considered by them an irreparable calamity. Instead of very narrow, crooked, and incommodious streets; dark, irregular, and ill-contrived wooden houses, with their several stories jutting out, or hanging over each other, whereby the circulation of the air was obstructed, noisome vapours produced, and destructive and obnoxious vermin harboured, the order of the King in Council declares that no man shall henceforth presume to erect any house or building, great or small, but of brick or stone, under penalty of having it pulled down; the cellars to be well arched. That Fleet-street, Cheapside, Cornhill, and all other eminent and notorious streets shall be of sufficient breadth; that no lanes or alleys shall be erected but where absolutely necessary; that keys or wharfs be formed, and no house to be erected within so many feet of the river. Many superb edifices were erected; greater attention was paid to paving and lighting the streets, and had the plan of Sir Christopher Wren been carried out, many of our modern improvements would have followed.

The Building Act of 19 Car. II. determined that there be only four sorts of buildings, defined by the Act, the largest embracing noblemen's mansions, not to exceed four stories high; that all new buildings be built with stone or brick, with party-walls; and three years were allowed, from the time of the conflagration, to rebuild the houses destroyed. All bricklayers, masons, plasterers, and joiners were to enjoy the privileges of freemen for seven years, or so long as the building was completing, and any exaction by them for material or labour was punished by fine or imprisonment. A spacious wharf 40 feet in breadth was also ordered to be erected from Tower-wharf to Temple-stairs, clear of all buildings other than cranes and sheds for the convenience of landing and preservation of merchandize; and for the more effectual preventing inundations, Thames-street and the ground between it and the river Thames to be raised 3 feet. And to enable the lord mayor and citizens to perform the stipulations of the Act, they were permitted to exact 1s. for every chaldron or ton of coals imported into the port of London. The exact width of many of the streets was defined by this Act.

Another order of council was shortly after issued to regulate the duty of surveyors, that special care be taken to preserve as far as possible uniformity in the lines of houses, the breast-summers ranging an equal height house with house; that encouragement be given to builders for ornament/sake, the ornaments and projections of the front buildings to be of rubbed brick; that the signs be fixed against the balconies, instead of across the street as heretofore, &c. A tax of 6s. 8d. for every foundation was also levied for the surveyor. Rules and regulations were also laid down for paving and levelling the streets. Many other local acts followed for improving and beautifying the city. Sir John Evelyn's plan, as given in Maitland's History of London, would have greatly added to the beauty of the city.

From this time nothing of interest to the "builder" can be said to have taken place until 1703, when the metropolis was visited by a terrible tempest, which, lasting for eight hours, committed great devastation, destroying many spires and turrets, overturning houses, blowing down a vast number of trees and houses, and killing many people. The city was particularly afflicted by this visitation, scarcely a house escaping without damage, and the streets being literally filled with bricks, tiles, signs, bulks, and pent-houses, and many of the houses were wholly stripped of their roofs; some idea of the immense damage may be formed by the rise of tiles from one guinea to six pounds the thousand. The damage at sea exceeded that on land. Twelve men-of-war were lost, with above 800 men on board, and an immense number of merchant-ships, the Thames and sea-coasts being covered with wrecks. In 1709, in consequence of the vast increase of the city and suburbs, fifty new churches were ordered to be built, in or near the cities of London and Westminster, an additional duty of 2s. per chaldron being laid upon all coals and culm brought into the port of London for the space of 137 days, and 3s. per ton for eight years afterwards. By the Act 2 Geo. I, cap. 28, in consequence of many contentions having arisen among neighbours concerning rebuilding their houses within the city and liberties, it was ordained, that if any person refused or neglected to build his share of a party-wall after due notice was given him, his next neighbour may build it for him, and oblige the person so neglecting it to pay the charges of rebuilding it; and that the water falling from the tops of houses, &c., should be conveyed into channels or kennels by pipes in the front or sides of the houses, on pain of twenty pounds penalty. In 1734, the city of London was lighted by 1,000 lamps only, the contractors paying the city the sum of 600*l.* annually for lighting the same. Every householder paying poor's-rates being taxed 6s. per annum by the contractors, who were compelled to light only on dark nights till twelve o'clock from Michaelmas to Lady-day, excluding moonlight, or ten nights in every moon. In this year an alteration took place, a more equitable mode of lighting and taxing was imposed, and the number of lights were increased to 4,679. About this time the Fleet-ditch was covered in, and converted into a market. In 1738 the Mansion-house was built on the site of Stock's-markets, the first pile was driven at Westminster-bridge, and the foundations of the Foundling Hospital were laid. In 1747 a great fire happened in Cornhill, by which 100 houses were burnt down, which had the usual effect of improving the appearance of the city. In 1750 the city was visited by an earthquake, but without any damage being done; it was sensibly felt in the cities of London and Westminster, Highgate, Hampstead, Greenwich, Richmond, &c.

In 1739 London within the Bills of Mortality consisted of 5,099 streets and 95,968 houses; of which 42,676 houses were insured in the Hand-in-Hand Fire-office, at 9,231,400*l.*, and 7,852 in the Westminster Fire-office, at 2,059,121*l.* The rents of the houses at a medium within the city and suburbs were estimated at 26*l.* 2s. 11d. each, or 2,509,160*l.* 3s. 7d. for the whole.

Having thus noticed every matter of interest to the builder connected with the vicissitudes and progressive improvements of London up to the present time, we shall conclude with a few remarks on its present condition. London now stands pre-eminent among nations; its progress in architectural improvements since 1814 is acknowledged even by foreigners to be marvellous; and the piles of buildings meeting the eye at every turn in the West-end, are unerring testimonials of the increasing wealth of its inhabitants, comparatively little affected by an enormous taxation, the result of a long-protracted war. Its proudest edifices are the results of individual enterprise, unaided by the government; for though the latter affects rivalry, it cannot hope to surpass the numerous monuments of individual enterprise with which this great metropolis is adorned: its docks, bridges, canals, the colleges and hospitals, theatres, clubs, palaces, picture-galleries, breweries, distilleries, and other public works. The inhabitants walk with pleasure the carefully-paved and well-regulated streets by day, and the illuminated streets by night, secured from violence by a well-regulated police; and an endless stream of wealth flowing in from all quarters of the globe, however unequally distributed, is still in some degree shared by all. "When," says the Marquis de Vermont, "I reflect on the variegated scenes which hourly draw my notice; when I add to my own observation those of others, on whose judgment I can rely; when I gaze upon this mighty metropolis, so rapidly augmenting in size and grandeur; when I recollect the high moral and military character which your arms attained in the last war; when, extending my views to literary and scientific subjects, I find that while the Duke of Wellington triumphed in the field, Dr. Jenner and Sir H. Davy were immortalizing both themselves and Great Britain by discoveries for which they will receive the blessings of ages yet unborn; and that Crabb, Moore, Scott, and Byron, after raising the poetical fame of the country, still live, and still promise to carry higher their own and England's reputation; when I put all these contemporary circumstances together, I am compelled, in spite of early prepossessions, to acknowledge that you are rapidly approach-

* See vol. ii. page 528.

ing the goal of national greatness." Twenty years have passed since the above was written, and since then improvement has marched through the metropolis with giant strides, swelling her dimensions and multiplying her inhabitants, and still we appear as far as ever from the goal of our greatness. West, north, east, and south, we see London still stretching forth its thousand arms, swallowing up every villa in its environs, and compassing every obstacle which it cannot overcome; and railways, as so many main arteries, diverging on every side from the great seat of life, must and will give additional impetus to its trade and commerce, and contribute to swell out still further its extent and population. As the powers of the human mind become developed, as improvement keeps pace with invention, as wealth increases with the increase of our wants and requirements, so we find the sting of pestilence and disease lose its force. Time and space annihilated, and apparent impossibilities accomplished, we find the means of national, intellectual, and physical enjoyment awaiting our disposal.

In the midst of increasing prosperity and the almost universal pursuit of wealth by the shortest possible road, it is gratifying to find that in the rage for improvement, the poor are not quite forgotten; that the most considerate attention is being paid to the drainage and ventilation of this and other large cities, and the dwellings of the poor are not altogether overlooked: the new Buildings Act will go far to mitigate the sufferings of the labouring classes by disposing them in healthy and commodious dwellings, and ere long the exertions of philanthropy will go much further in removing those moral plague-spots wherein poverty and crime are necessarily associated, cursed with a tainted atmosphere and the society of each other. St. Giles's, once the impenetrable sanctuary for the Alsatian, the highwayman, and the street brawler, noted for its filth and squalid wretchedness, is gradually disappearing; but, unless timely means are taken, the evil is only removed to another quarter of the metropolis, not eradicated; it is therefore the bounden duty of the legislature to apply more effectual measures for enforcing cleanliness, ventilation, and drainage in all crowded places. Private benevolence may mitigate, but it cannot eradicate the evil. Baths and wash-houses will do much towards purifying these abodes of vice and wretchedness, education will do much more, but nothing permanent can be expected until the means of an honest living are placed at every man's disposal. Many means to attain ends so truly desirable are devised in the present day, but political quackery is too apt to usurp the seat of Christian benevolence, and the millions must still suffer on until property, under its various forms, awakens to a sense of its duties; then, indeed, London will have reached the goal of its greatness and prosperity.

x x x x.

IMPROVED DWELLINGS FOR THE WORKING CLASSES IN EDINBURGH.

The public will be gratified to learn that the preliminary measures are in progress for calling a public meeting with the design of constituting a sanatory council, or association for the promotion of public health in our city. The state of the Old Town is now such that some vigorous effort is certainly necessary, in order to render it a more fitting residence for such of the middle and working classes as have their abode in it. There is a clamant need in particular for improved dwellings for the working classes, and, indeed, for an extension of the number of houses devoted to their accommodation, as it is found at present nearly impossible for a working man to obtain such a dwelling as he requires, and could well pay for. The first object now in view is to form a standing council of gentlemen competent to ascertain and judge of measures desirable for the public health, which they shall endeavour to promote by all means within their power. Amongst their duties will be that of dealing with private parties, individually, or joint-stock companies, who may be disposed to build new houses for the working classes, on improved principles, giving to such parties the benefit of their authority and sanction, provided that they follow the proper rules as to the local arrangement of their buildings, the needful accommodations, drainage, sewerage, and other requisites. It is conceived that speculations of this kind may obtain favour amongst capitalists, as it can be shewn that the required outlay may make a good return, even while tenants are better and more cheaply accommodated than at present, if only care be taken to keep up the character of the new buildings in moral and physical respects, which it is by no means beyond the power of prudent regulation to accomplish. The gentlemen, with whom this movement originates, contemplate both the erection of buildings in open suburban situations, and the substitution of improved dwellings for masses of the older and more ruinous parts of the city. In every case there will be due care taken to provide open-air spaces for the recreation of children, apart from contaminating street influences; general accommodation for washing may also be furnished, if, upon due deliberation, thought advisable; ventilation, the supply of water, and arrangements for the removal of all kinds of refuse, will be special objects; in short, while no extravagant views of any kind are entertertained, it is believed, that, by good practical arrangements, and working upon a large instead of a narrow scale, the working classes may be supplied with domestic accommodations, comprehending a large amount of comfort, favourable to, instead of destructive of health; and lastly, but not least, promotive of their moral interests, seeing that a home which we can love and delight in is, by universal acknowledgment, the first requisite to the virtues.—*Scotsman.*

Obituary.

THE LATE ALFRED BARTHOLOMEW, ESQ., F.S.A.

In accordance with the promise contained in our last number, we now proceed to lay before our readers some notice of the life and works of this gentleman, whose death took place on the 2nd day of the present month, in the midst of a career of usefulness, and at the very time that a life of untiring zeal, self-denial, and study, had apparently placed within his grasp, at no distant period, complete success in this world; which, however, it has pleased the all-wise Arbiter of our fates he should never enjoy.

Mr. Bartholomew was born in London on the 28th of March, 1801, and although he had acquired at school only that moderate degree of education which usually falls to the lot of those amongst the middle ranks of society who are not destined for one of the learned professions, his early-developed devotion to geometry and science in general determined his father to bring him up to the profession of an architect, and he was therefore articled to Mr. J. H. Good, then of Hatton Garden (a former pupil of Sir John Soane), now the surveyor to some of her Majesty's palaces, and to the Commissioners for Building New Churches, &c.

Mr. Bartholomew's destiny being thus fixed, he applied himself to the study of his profession, as well as to other congenial pursuits, with all the energy that was inseparable from his character: up early in the morning during his pupilage, he employed himself in carefully measuring and delineating, amongst other buildings, the most beautiful parts of the Bank of England, with a reverence for Soane, to whom, by his connection with Mr. Good, he seemed in some sort to claim kindred.

Perspective, whilst he was under articles, received, as it always should do, the careful study of the aspirant; and having in this respect acquired the requisite proficiency, he was called upon to communicate it to the younger branches of a noble family, where he received the first pecuniary gratification that resulted to him from the studies to which he had devoted himself.

Architecture, however, although apparently the *all-absorbing* subject, did not entirely engross him; amidst an attention to it which appeared to be undivided, he yet found time for the acquisition of several languages, and compiled, unknown to any, a new version of the Psalms, which was published in the year 1831, under the title of "Sacred Lyrics, being an attempt to render the psalms of David more applicable to parochial psalmody."

This work, a labour of love, contains strains of the sweetest character, and occasionally the sublime pathos of the original appears through its English dress with a force and beauty but little diminished (and this is saying *much*) by the change into our own language; and although containing some inequalities, yet, on the whole, as far exceeds the general tameness of Nicholas Brady and Nahum Tate as their version stood above the antiquated dulness of Sternhold and Hopkins. Still, and though warmly praised by nearly the whole bench of bishops, in complimentary letters to the author, it has yet made no way in public use.

After the publication of the Psalms, Mr. Bartholomew's literary labours appear to have been more peculiarly devoted to his profession, and particularly to recording from time to time the thoughts ultimately embodied by him in his "Specifications for Practical Architecture," which work, displaying, as it does, some singularities and blemishes, perhaps the too common accompaniment of genius, may be studied with advantage by every member of the profession, and is calculated to effect much good. It cannot fail to become a standard book.

Besides the "Specifications," Mr. Bartholomew is the author of "Hints relative to the Construction of Fire-proof Buildings" (very favourably reviewed in the *Gentleman's Magazine*), and of various fugitive papers that have from time to time appeared before the public, as well of a professional as of a non-professional character. He has left uncompleted numerous sketches of a miscellaneous nature, full of ability, but not fitted for publication. His leading articles as editor of this journal during the past year are before the public, and have received favourable judgment, as evinced by the increased circulation of the periodical during his connection with it.

Amongst the most prominent objects of Mr. Bartholomew's thoughts was Gothic Architecture, in the study of which he was enthusiastic; and hence in a great measure (prompted by his veneration for those itinerant architects, to whose genius we owe the magnificence and beauty of our Gothic cathedrals) arose his zeal in favour of the society known as "Freemasons of the Church, for the recovery, maintenance, and furtherance of the true principles and practice of architecture," which was commenced by him.

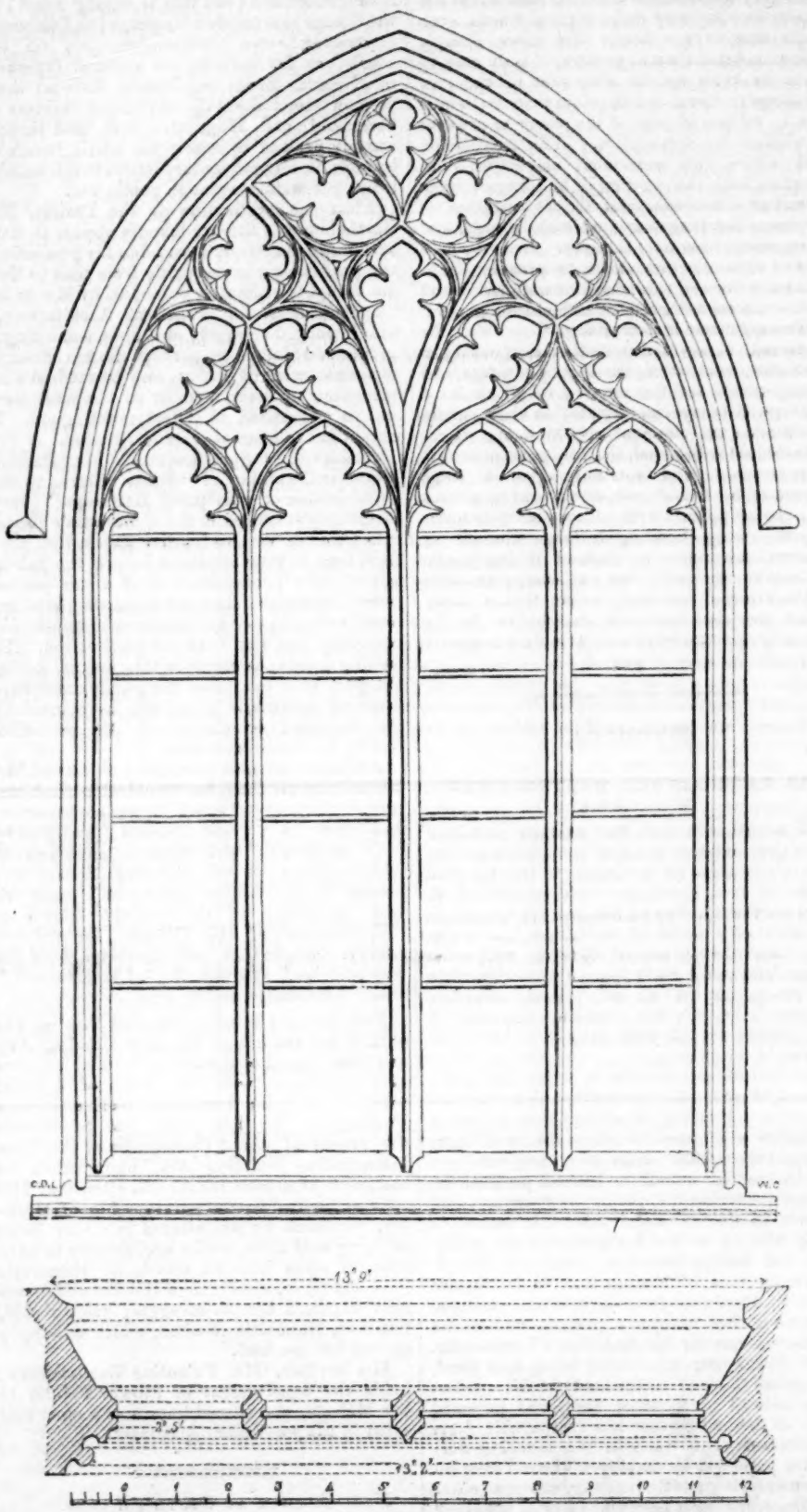
Few men are better acquainted than he was with either the old or the new Building Act, and with regard to the latter, he had frequent correspondence with the Earl of Lincoln whilst it was being framed and carried through Parliament; his last work was to correct the proofs of his "Cyclopædia of the New Metropolitan Building Act," upon which he bestowed the utmost labour and attention. His canvass for the district surveyorship of Hornsey, to which he was elected by a very large majority only a few weeks ago, appears to have brought upon him an attack of rheumatic gout and fever, but through this his physicians fully expected him to struggle; taking cold, however, bronchitis resulted, which unhappily proved but too fatal.

His brother, Mr. Valentine Bartholomew, holds the appointment of Flower Painter to her Majesty, and is well known as a most able artist in his particular department.

New Church at South Shields.—The foundation-stone of this church was laid by Robert Ingham, Esq., of Weston, on the 26th ult. It is arranged to receive a congregation of 800, and the plans have been so skilfully designed by Mr. Salvin, the architect, and the execution of the work by Mr. Alderson is to be of so substantial a character, that accommodation may be added for a larger number when required. The church is intended to be ready for divine service on the 1st of June next.—*Newcastle Journal.*

Keswick Church.—This church is about to undergo a general alteration and repair at the estimated cost of upwards of 3,000*l.*, which will be laid out for that purpose by a private gentleman, J. Stranger, Esq., of the Dovecot, Keswick. The same gentleman some time ago built a new school for the benefit of the town which cost upwards of 1,000*l.* In Keswick church-yard lie the remains of the late Dr. Southey, poet-laureate. —*Westmoreland Gazette.*

WINDOW IN AISLE, DUTCH CHURCH, AUSTIN FRIARS.

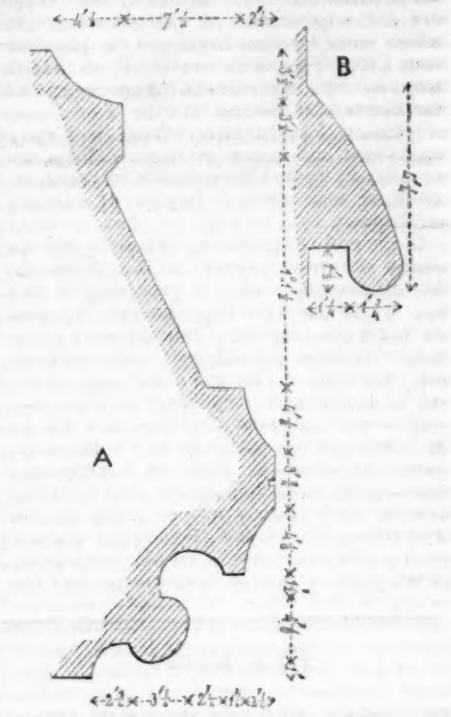


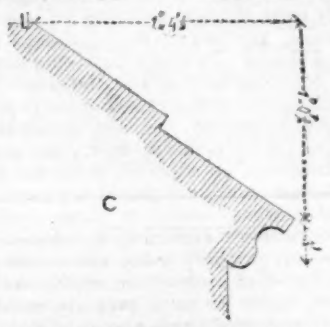
Plan of Window.

GOTHIC DETAILS FROM THE DUTCH CHURCH, AUSTIN FRIARS.

In the second volume of THE BUILDER, at page 6 and page 348, there is a general account of the Dutch Church in Austin Friars, so far as relates to its history, with views of the west end and interior. It is a part of the ancient Priory of St. Augustine, the chief residence of the friars of that order in England,* whence the name of the place. After the dissolution of the monastic orders, the Priory of St. Augustine fell into various hands: the west end of the conventual church was granted for the use of the Germans and other fugitive Protestants, and the remainder was appropriated to meaner purposes. The steeple was standing in the year 1609, and seems to have been held in great esteem, if we may judge from the words of a memorial from the lord mayor and citizens, praying the Marquis of Winchester, the owner, to repair it.† The memorial said: "The fall of it, which without speedy prevention is near at hand, must needs bring with it not only a great deformitie to the whole city, it being for architecture one of the beautifullest and rarest spectacles thereof, but also a fearful eminent danger to all the inhabitants next adjoining." Fifty or sixty pounds, it was shewn, would have preserved the structure, but the request was refused, and as the citizens had not the spirit to repair it themselves, the steeple was demolished.

The present church is a spacious structure divided into three compartments (nave and aisles) by two ranges of pillars and pointed arches, as stated more at length in page 348, and is lighted by a series of large windows on each side: one of which, and they are all alike, is represented by the accompanying plan, elevation, and sections, carefully measured and drawn by Mr. Caveler. A is a section of the reveal, B of the label-moulding,





and C of the cill. The tracery of the window is not uncommon in works of the 14th century; one example may be seen in Worstead Church, Norfolk, figured in the "Oxford Glossary."

In the following number we shall give similar drawings of the large west window. We propose to refer hereafter to these and other details (which we shall furnish from time to time) in illustration of a connected series of papers on the history of Gothic architecture and the characteristics of works of different periods.

* Founded by Humfrey de Bohun, Earl of Hereford and Essex, 1253, and re-edified in the year 1351, by his descendant of the same name.

† The previous Marquis of Winchester built a mansion on the site of the monastery called Winchester-place. In Winchester-street there are still many of the overhanging houses with gables towards the road, which were at one time general, but are now hardly to be found in London.

TABLE OF CREDENCE.

THE credence was a small table by the side of the altar on which the bread and wine were placed before consecration. There is a good specimen in the church of St. Cross, near Winchester. Sometimes its place was supplied by a shelf in the niche above the piscina. In reply to a correspondent, who inquires the origin of the term, we give the following:—

It was once the office of a servant called the prægustator, to taste every dish before it was placed on the dinner-table, in order both that the cookery might be tested, and all fear of poison removed from the guests. (See "Facciolati's Lexicon,"—Prægustator.) He who did this was said by the Italians *far 'la credenza*, and thus credenza or credentia, came in time to mean the side table on which this process was performed, and afterwards was applied to any side table, such as were those on which the elements were placed previous to their being carried to the altar. (See Ducange, ver. "Credentia.")

MR. COCKERELL'S LECTURES ON ARCHITECTURE.

On Thursday, the 9th instant, Professor Cockerell delivered the introductory lecture of his course on Architecture at the Royal Academy. He pointed out the insufficiency of six lectures to convey any adequate knowledge of the principles of architecture, and that all the professor could do was to give the proper bent to the studies of his hearers. Himself risen from the ranks of the profession, he could better enforce the dictum of Vitruvius, that it was the union of theory and practice which made the skilful architect. He strongly urged the importance of present studies, for which every encouragement and great facilities were afforded by the Institute of British Architects, and by the courses at King's College and the London University.

There was a distinction between genius and taste; one was the gift of Nature, but taste was to be acquired by learning and by examination of the history of past times. The lecturer was limited to uphold the authority of former times. The difficulty to define taste was great, yet all men would confess ignorance, but never want of taste. It had been perhaps best explained as "that sensitive rectitude or refinement of judgment which we call taste." Genius was essential to success in the arts, but taste, or learning, was demanded of the architect, and it did seem that a certain respect for the practice of former times was desirable and necessary in him. There was great contention in the present day about styles; one cried out for something suited to the climate, another for a style nurtured in the country. The Germans, who had not long ago emerged from semi-barbarism, had sought in the stories of Wodin for a mythology to supplant the old; but the respect of ages was not yet to be set at naught, and the love of classic art would again prevail, let present opinion say what it would. In architecture, learning was essential, and the only safe course was, not by acting counter to, but in the spirit of those rules which ages had registered. The art was built on the accumulated evidence of former times; that calculated to satisfy the future must be founded upon the preceding. Pope had well said:—

"When first young Maro, in his boundless mind,
A work to outlast immortal Rome design'd,
Perhaps he seem'd above the critic's law,
And but from Nature's fountains scorned to draw:
But when to examine every part he came,
Nature and Homer were, he found, the same.
Convinced, amazed, he checks the bold design,
And rules as strict his labour'd work confine,
As if the Stagyrite o'erlooked each line.
Learn hence for ancient rules a just esteem,—
To copy nature is to copy them."

In the present day all styles were in request; the scholar desired to be reminded in his residence of the people the first in learning and in art; the titled possessor of broad lands erected the donjon keep in the pride of feudal times: each class had its particular association. The absurd turns which style had taken in our own recollection, were almost beyond our own powers of belief. The accident that made Sir Wm. Chambers a supercargo, first gave us the Chinese style; the work of Denon flooded us with the Egyptian; had Algiers or Mogador presented the least thing available, our neighbours, more susceptible than we are, would have taken it up. Fashion would have its day; it warped our taste; and the architect's only proper course was to have his buildings constructed upon permanent principles, recurring to history, and regardless of the fashion of the day. Pope said:—

"Something there is more needful than expense,
And something previous e'en to taste—'tis sense;
Good sense, which only is the gift of Heaven,
And, though no science, fairly worth the seven."

The efforts of professors were now more than ever necessary, as, without unwarrantable complaining, it must be said that the present state of taste was bad. He considered so from the absence of all originality, the complete indifference of the public to style, and the indiscriminate practice of all styles. Competition, in which the old and young were mixed up together, was also injurious to the interests of art. The art likewise suffered greatly from the undue influence of engineers, who were entirely utilitarian in art, caring nothing for taste, and absolutely riding over the architect. The beautiful balustrade of a bridge had been swept away entire by an engineer, and replaced with an unsightly wall, and *without a remonstrance*. The buildings of our greatest architect did not escape. Nevertheless, there was all to hope from the future, and Barry's prediction might be held as true, that "he had lived a hundred years too soon." Great works *had* been impossible, and in one "glorious" war was spent as much as would have raised 800 public buildings. Royal patronage had done every thing for art abroad; it would be seen what public patronage could do in England, and it behoved the students to employ their time in such manner as to benefit the art.

The lecture concluded shortly after nine o'clock, amidst the general applause of an attentive audience. We did not notice many of our older professional brethren amongst the professor's auditors; we trust they will attend his succeeding lectures, as their presence is a compliment which his services merit.

* *

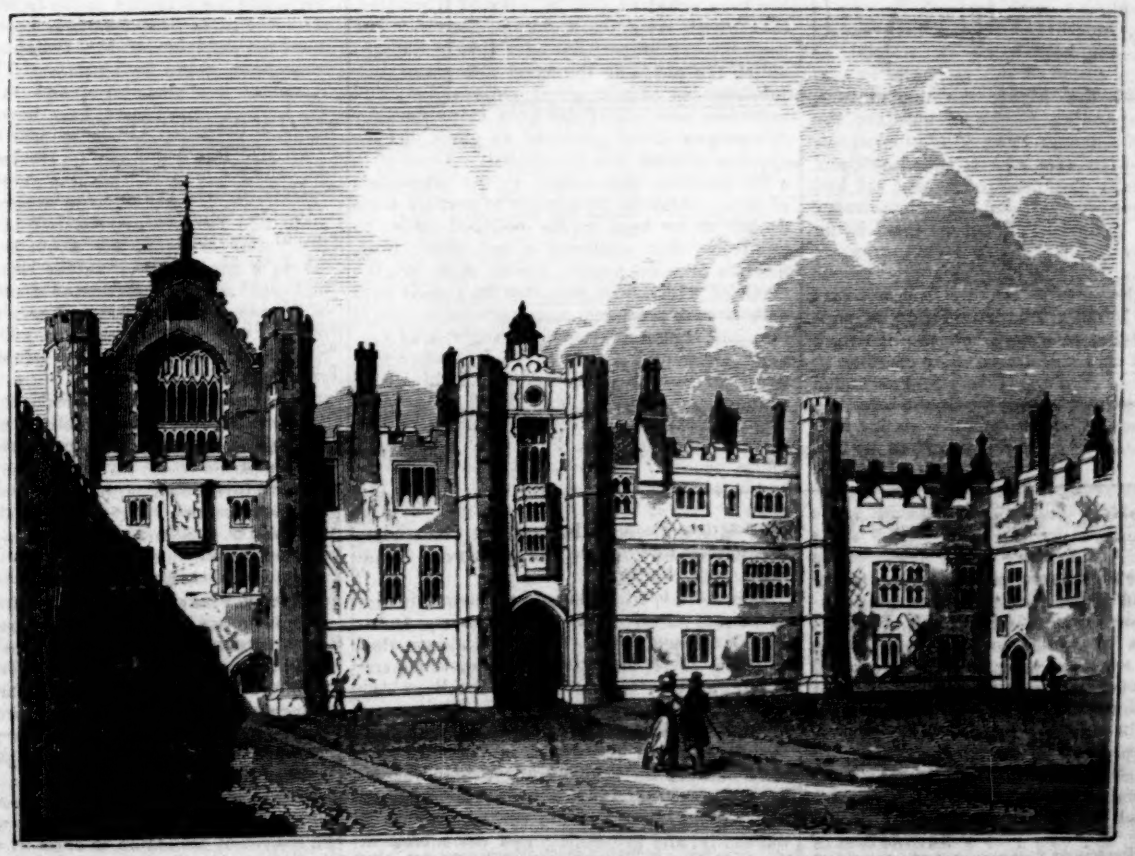
New Books.

Old England. Edited and Published by Chas. Knight. London, 1844. Vol. I.

The first volume of this extraordinary work, which is literally what it professes to be, a pictorial museum of regal, ecclesiastical, baronial, municipal, and popular antiquities, is now completed, and includes the British period, Roman period, Anglo-Saxon period, and the period from the Norman conquest to the end of the reign of Richard III., A.D. 1485. It contains no less than 1,390 illustrations, twelve of which are illuminated engravings, folio size, for a sum which is so small, as to put the book within the reach of all classes. Unlike what were called cheap books formerly, it may be depended on too, and we again say, conscientiously, that it is an extraordinary work. Amongst the illuminated illustrations are views of the interior of the Temple Church, Edward the Confessor's Chapel, at Westminster, Henry the Seventh's Chapel, and the Oratory of the Beauchamp Chapel, Warwick.

The subjoined specimen of the wood engravings, representing the middle quadrangle of Hampton Court Palace, is not by any means one of the best, but was selected by us that we might remind our readers of the proximity of this interesting structure to the metropolis, and induce those who have not been there to visit it. The chapel, the great hall, and various offices, remain as they were built by Wolsey and King Henry VIII.

The collection of pictures is full of interest, especially as historical illustrations, and, to crown all, there are Raphael's cartoons for our study and admiration.



VIEW OF THE MIDDLE QUADRANGLE, HAMPTON COURT PALACE.

DRY ROT.

Damp is not only a cause of decay, but essential to it; while, on the other hand, absolute wet, especially at a low temperature, prevents it. This latter must be understood to imply more than the partial immersion to which log-rafts are usually subject; for that is a practice unquestionably injurious to the timber. Piling and planking under damp foundations, notwithstanding the incontrovertible instances which can be adduced of their long endurance, are practices decidedly bad; for the decay of the timber is little less than certain: the sinking of the superstructure must obviously keep pace with it, and the settlement being irregular, must produce fractures in the edifice. Again we say, if the wet is perfect, the result is otherwise. Old refuse-wood that has been lying about in timber yards, imbibing moisture from the earth, makes bad bearers for logs; for it is more or less decayed, and therefore infectious. To bed timbers in mortar, which is liable to continue long in a humid state, is bad; under such circumstances decay may be expected: to prevent this chance, it was enacted by the 19th Car. 2, cap. 3, that bond and plates, the ends of girders, &c., should be bedded in loam instead of mortar: it may be here remarked that sawn timbers are, in their sides, more subject to the influence of moisture than such as have been split; for, as the saw cuts through the fibres, the moisture is afforded more ready access; for this reason cleft pales are the most durable. Hasty finishing on damp walls delays drying, and must induce premature decay where timbers are confined: drying therefore should, in favourable weather, be accelerated by a free admission of air, and in the night by fires, but not too strong, for that would cause the wood-work to shrink and crack.

The confinement of timbers under most circumstances is attended with the worst consequences; yet a partial ventilation tends, as an able writer has expressed it, to "fan the flame" of decay, and hasten rather than prevent it: floors in general do not afford good facilities for ventilation, and are therefore very liable to decay: the joints of even well-ventilated framing frequently afford illustration of this; for when the timber has not been thoroughly seasoned, the moisture which there seeks escape, and (from the parts being neither perfectly close nor yet sufficiently open to allow dampness to evaporate) is confined, invariably induces decay. Timbering to basement floors, and in close cellars, is destroyed in a very short time.

Damp combined with warmth is, as a destroying agent, still more active than simple damp alone—the heat being understood as insufficient to carry off the moisture by evaporation; and the higher the temperature, with a corresponding degree of moisture, the more rapid the decay. The kind of composition produced in this way is called rot, and is of two kinds, distinguished as *wet rot* and *dry rot*: these proceed from the same primary causes, the difference between them being constituted by the disparity in the evaporation; where that is free, and disperses the gaseous products of the putrefaction, we have wet rot; where there is not a free circulation of pure atmospheric air, to absorb all the moisture and carry off these products, they combine in the formation of a parasitical fungus called *boletus lachrymans*, belonging to the botanical class *cryptogamia*, and thus we have dry rot: of this serious evil it is important to be well aware:—

Dry rot, externally, first makes its appearance as a mildew, or rather a delicate white vegetation, that looks like such. This stage of the disease, if not one more advanced, is almost invariably found to be arrived at in the American timber brought over to this country in the confined and heated holds of ships; its next step is a collecting together of the fibres of the vegetation into a more decided form, somewhat like hoar-frost; after which it speedily assumes the leathery, compact character of the fungus, forming into leaves, spreading rapidly in all directions and over all materials, and frequently ascending the walls to a considerable height, the colour variable—white, greyish white, and violet, light or decided brown, &c. To give a forcible idea of the serious extent to which this disease will attain when once it takes root and is left unarrested, we shall collect some scattered cases.

In the memoirs of Pepys, who was secretary to the Admiralty during the reigns of Charles II. and James II., reference is made to a commission which was appointed to inquire into the state of the navy, and from which it appears that thirty ships, called new ships, "for want of proper care and attention, had toad-stools growing in their holds as big as one's fists, and were in so complete a state of decay, that some of the planks had dropped from their sides." In the *European Magazine* for Dec., 1811, it is stated that, "about 1798, there was, at Woolwich, a ship in so bad a state, that the deck sunk with a man's weight, and the orange and brown-coloured fungi were hanging, in the shape of inverted cones, from deck to deck." In the *Transactions of the Society of Arts*, vol. xxi. p. 294, we find that "an oak barn floor, which had been laid twelve years, began to shake upon the joists, and, on examination, was found to be quite rotten in various parts; the planks, 2½ inches in thickness, were nearly eaten through, except the outside, which was glossy, and apparently without blemish. The rotten wood was partly in the state of an impalpable powder, of a snuff-colour, other parts were black, and the rest clearly fungus. No earth was near the wood."

In timber which has been only superficially seasoned, and the heartward sap of which has never been discharged, this disease is produced internally, and has been known to convert the entire substance of a beam, excepting only the external inch or two of thickness to which the seasoning had penetrated, into a fine, white, and thread-like vegetation, uniting in a thick fungous coat at the ends, the semblance being that of a perfectly sound beam, thus serving as a mask to mislead the inexperienced. In this internal rot, a spongy or fungous substance is formed between the fibres.

The first symptoms of rottenness in timber are swelling, discoloration, and mouldiness, accompanied with a musty smell; in its greater advance the fibres are found to shrink lengthways and break, presenting many deep fissures across the wood; the fibres crumble readily to a fine snuff-like powder, but retain, when undisturbed, much of their natural appearance.

The prevention of dry rot, or growth of fungus, has engaged the attention of scientific men for a very long period; and much floundering has there been in their meritorious endeavours towards accomplishing this desirable object. Some of the means tried, while calculated to prevent vegetation, were found to introduce evils as great as those they were intended to obviate; even now, although much has been achieved, it is to be feared it remains, in a great measure, a *vexata quæstio*. The most favourite theory has been that of impregnating the pores of the wood with some such substance as should arrest putrefaction, and materials have sometimes been introduced for this purpose which produced an effect just the opposite of what was anticipated. About 1670 a Mr. Jackson, with a view to the prevention of decay, obtained permission to prepare some timber to be used in the national yards, by immersing it in a solution of salt water, lime, muriate of soda, potash, Epsom salts, &c., the result of which dose was, that the vessels built with it were rendered more perishable than if they had been constructed of unprepared timber. Between 1768 and 1773, a practice prevailed of saturating the timbers of ships with common salt, but this was found to cause a rapid corrosion of the iron fastenings, and to fill the vessels between decks with a continual damp vapour. Subsequently, mundic, found in the mines in Devonshire, was employed, in a state of fusion, to eradicate present, and prevent future growth; but whether its efficacy was proved by time, we have not been able to ascertain.

Quick-lime, with damp, has been found to accelerate putrefaction; but when dry, and in such large quantity as to absorb all moisture from the wood, the latter is hardened and rendered durable; vessels long in the lime-trade have afforded proof of this fact. White-wash or lime-water has been strongly recommended for use between the decks of ships, as being unfavourable to vegetation. Smoke-drying, oven-drying, scorching, and charring, have the effect of hardening wood, contributing to its durability, and preventing and destroying infection; but they may only be adopted with timber which has previously undergone a thorough seasoning. Steaming is also understood to prevent dry-rot. The piles supposed to have been driven by order of Julius Cæsar, when he forded the Thames at Cowey Stakes, near Shepperton, were charred; and when taken up some five-and-thirty years ago, were found in a complete state, free from decay. The incorruptibility of charcoal is well known, whether it be buried in the earth, exposed to the atmospheric action, or to that of water; the beams of the theatre of Herculaneum, which were reduced to that state by lava, were, after a period of nearly eighteen centuries, found to be perfect; the charred feet of posts which are put into the ground afford proof of its efficacy; the flag-ship, *Royal William*, at Spithead, built in 1719, the inner surface of the planks of which only were charred, was an example of great durability. Amongst other advantages, rats will not touch charcoal, neither will the white ants and cock-roaches, so common in the Indies, commit their depredations where charring has been employed.

But the methods which have most engrossed the public attention of late years are those respectively distinguished as Kyan's, Payne's, Burnett's, patents, &c. In the years 1833 to 1836, at the Arsenal, Woolwich, experiments were instituted, having for their object the establishing or otherwise the claims of that first mentioned, and the results of which were of a very satisfactory nature: the Kyanised specimens generally, which were submitted to the fungus-pit, when taken out at the end of three years, being sound, while duplicate pieces, unprepared, were found in various stages of decay. Certain questions, however, presented themselves:—1st, Whether the impregnation to which the timber had been subjected might not be removable by some cause, and perhaps generate an atmosphere noxious and injurious to health. 2nd, Whether the strength of the timber were impaired or otherwise. The first was satisfactorily determined by Dr. Faraday, who proved by experiment that the combination was not simply mechanical but chemical, and that a permanently compound material was formed; the second was solved by experiments made by Capt. Alderson, C.E., upon ash and Christiania deal, and which shewed that the rigidity of the timber was enhanced, but its strength in some measure impaired; its specific gravity being also somewhat diminished. Another question yet remains open:—how far, since the impregnation has not been traced to a depth greater than half an inch, does this process meet our requirements? and, after the satisfactory conclusion arrived at, as above related, and the evidence of the facts upon which it was so reasonably founded, how are we to meet the assertion of Mr. Pritchard, C.E., of Shoreham, made in 1842?—"The sleepers Kyanised five years ago, and in use at the W. I. Dock warehouses, have been discovered to decay rapidly; and the wooden tanks at the Anti-Dry-Rot Company's principal yard are decayed:" but more from this gentleman hereafter. Mr. Kyan's infusion is corrosive sublimate, and the process consists in submersing the timber in tanks for about a week, then taking it out and drying: Sir Humphey Davy had previously recommended a weak solution of the same thing, to be used as a wash where rot had made its appearance. Dr. Birkbeck made a favourable exposition of the process as pursued by Mr. Kyan; Sir John Barrow and the Duke of Portland impugn it; and Lord Manners and Dr. Moore follow on the same side. The Paynising process, besides professing to preserve timber from dry-rot and the ravages of insects, is said to render it uninflammable, or at least to deprive it in a great measure of combustibility.

James Wylson.

Altar-piece, St. James's Church, Bermondsey.—About seventy sketches, it is said, were submitted to the committee in reply to their advertisement. The successful competitor is Mr. John Wood, of Charlotte-street, Fitzroy-square. After the picture is painted, however, the premium will not be paid, unless referees, to be appointed, shall pronounce it worth the sum offered, 500*l*.

Statue of Prince Albert.—A committee of the most influential merchants of the city is in course of formation to erect by subscription a full-length marble statue of Prince Albert, in the Royal Exchange, in commemoration of his having laid the first stone.

ON TIMBER SCAFFOLDING FOR BUILDINGS.

By Thomas Grissell, Assoc. Inst., C.E.

From the Proceedings of the Institution of Civil Engineers.)

In adopting the principle of timber scaffolding for buildings, in preference to poles and ropes, Messrs. Grissell and Peto, the contractors, were influenced by considerations of saving both time and expense. They had long been impressed with the want of scientific principle exhibited in the ordinary scaffolding, and were more readily induced to turn their attention to that now referred to, which they believe to be an essential improvement, and calculated to be of considerable advantage to contractors on large works.

The author is well aware of the progress which has recently been made by the civil engineers and architects of this country, but he ventures to claim some share of merit for the practical builders, to whom is committed the execution of the works designed by the engineer and architect; and when a review is taken of the stupendous public works which have been executed within the last few years, it is evident, that without the exercise of great skill, and the introduction of new modes of reducing labour, the amount of work could not have been executed within the time.

The necessity for this reduction of labour on large works had been long felt in the north, and methods had been adopted in consequence, to emulate which, this timber scaffolding was introduced to London. The system had been employed, in rather a rude form, by Mr. Tomkinson of Liverpool, in his quarries and stone yards, for moving stones of large dimensions. Scaffolding of a somewhat similar kind was used in the erection of the Arc de Triomphe, Barrière de l'Etoile, and at the Eglise de la Madeleine, at Paris.*

The first time it was used by the author's firm was for the erection of the Reform Club-house (Pall Mall), under Mr. Barry, in 1838; then at the large graving-dock at her Majesty's Dock-yard, Woolwich, under Mr. Walker (Pres. Inst. C. E.), in 1839; and it is now employed very extensively at the New Houses of Parliament. In these constructions its general applicability was proved, and in the erection of the Nelson Column (commenced in 1840), where it was carried up to the height of 180 feet, its stability at a considerable elevation was fully tested. Its usefulness is manifested by the facilities which it affords to the workmen, particularly in buildings of stone. By its aid, and with the travelling machine at its summit, one mason, or 'setter', can set as much work in one day, as was formerly done in three days; whilst at least six labourers are dispensed with, who, with the old mode of scaffolding, were always required to be in attendance. It is also well known that scaffolding poles and cords are not only expensive, but are subject to rapid decay, and after a few years' wear become useless; in fact, the scaffolding of a moderately extensive building costs a large sum when first purchased, but it is almost valueless after a comparatively short period of time. Such is not the case with the timber scaffolding, which may be said to be of no greater cost to the contractor than the expense of its erection, which will not exceed in any ordinary case three-pence per foot cube. It is not secured together by either bolts or spikes, so that the waste is trifling; and after having performed its duty as a scaffold, it may be removed piecemeal into the building, at the level of each floor, and be used directly for constructing the roof and the internal carpentry of the structure. The timber having become seasoned by its exposure to the weather, is consequently better fitted for immediate use.

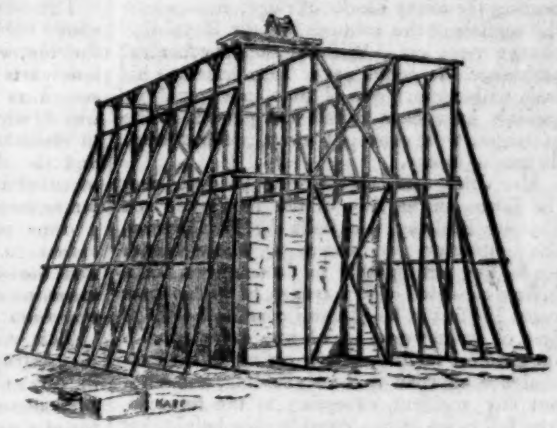
These advantages have been proved in the buildings which have been mentioned, and after an experience of more than five years, the author strongly recommends the adoption of the system. He also advises its use in moving and working large stones, either for permanent erections, or in masons' yards. If used on a wharf the rent would soon be saved in labour, and by allowing the stage to project 8 feet or 10 feet over the river, the scaffolding would be found to answer the purpose of a crane.

The scaffolding at the Nelson Column, designed by Mr. Allen, under whose direction the work was executed, was composed of sills, uprights, cross-heads, longitudinal timbers, braces, and struts, which were used whole, without sawing; the upright timbers were slightly tenoned into the horizontal timbers, and the junctions were secured by iron dogs driven into the timber diagonally across the joints. This mode was preferred to bolts or spikes, on account of the ease with which they could be withdrawn, and because the timber was not injured. The base of the scaffold was 96 feet square, exclusive of the raking-braces; the height of each stage varied from 48 feet to 21 feet, upwards; and the total height was about 180 feet. The total amount of timber in the scaffold was 154 loads, or 7,700 cubic feet, and the cost of its erection was 240*l.*

Its stability was secured, at the height to which it was carried, by using flying windbraces, supported upon cross transoms, running outwards about 6 feet beyond the perpendicular of the scaffold at each stage.

Mr. Nicholson remarked, that a scaffolding of a similar description was used in 1837 by Messrs. Cubitt (Gray's-inn-road), for erecting the entrance gateway of the London and Birmingham Railway (Euston-square).† It was composed of two parallel rows of whole timber uprights, 50 feet high and 17 feet apart, surrounding the building (Fig. 1); these were well stayed by diagonal braces, and a tramway was formed on the top of each row, by horizontal sill pieces, bolted down and secured by plates. The building work was executed by the aid of travelling carriages upon the tramways, and when the masonry had reached the height of the first scaffold, a second series of uprights and sills was added, making the total height 90 feet, which enabled the work to be completed without an accident.

Fig. 1.



Scaffolding used for building the entrance of the Euston Square Station of the London and Birmingham Railway.

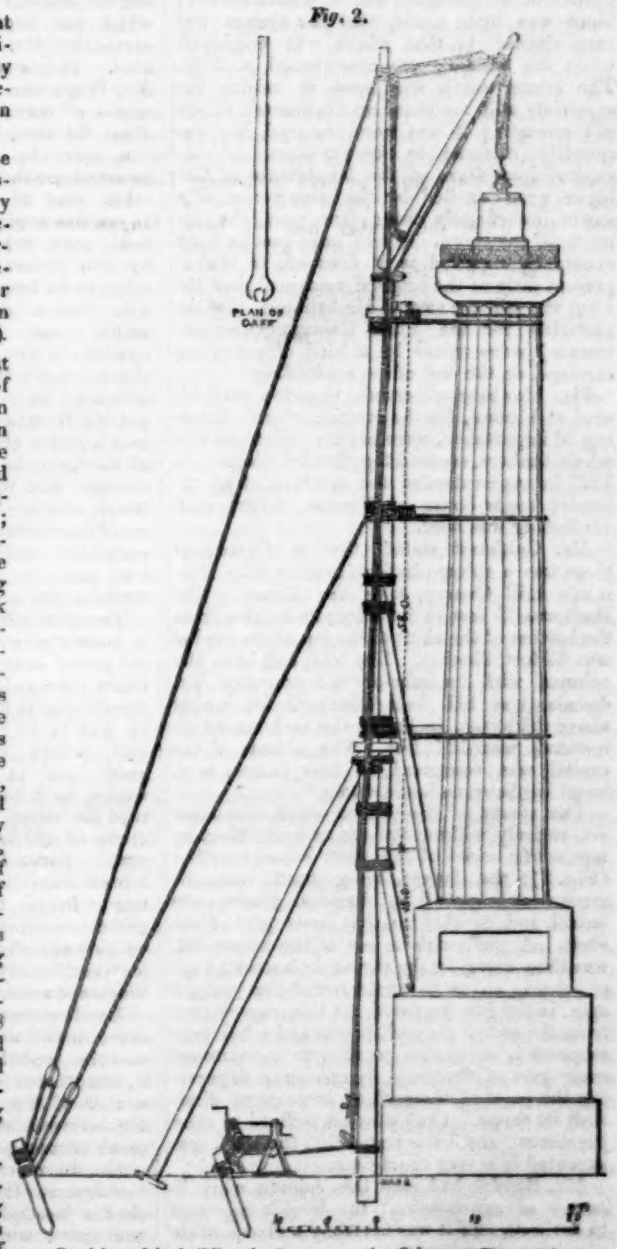
Mr. Harrison believed, that a scaffolding of a somewhat similar construction was used by Messrs. Rennie, at the Victualling-yard at Plymouth, in 1826.

Mr. Rennie said, that the scaffolding employed for raising the statue and other heavy parts of the work, at the Victualling-yard, was on the derrick principle, and was somewhat similar to that used for erecting the Commemoration Column at Devonport (Fig. 2).

Mr. Grissell stated, that when writing the account of the scaffolding at the Nelson Column, that which had been used by Messrs. Cubitt, at the entrance of the London and Birmingham Railway, had entirely escaped his recollection; he now remembered it perfectly, and was happy to have the opportunity of acknowledging that fact. He could not speak too highly in praise of the system, and he thought its advantages had, as yet, been underrated. The waste of timber was comparatively nothing; while serving as scaffolding it was becoming seasoned, and like that at the Nelson Column, could be immediately worked up, in situations demanding dry timber. The cost was one-half, and sometimes one-third, of the ordinary kind of scaffold, if the loss by the rotting and destruction of poles and cords was taken into account. The saving of labour in raising the materials was very great, particularly where weights of from 8 tons to 14 tons were required to be lifted. If steam power had been used at the Nelson Column, a still greater saving would have been effected.

Another considerable advantage was the freedom from danger to the workmen; during five years, in all the works where he had used this kind of

Fig. 2.



Derrick used for building the Commemoration Column at Devonport.

* The square timber scaffolding was employed by Domenic Fontana, in 1586, for the erection of the Egyptian Obelisk in front of St. Peter's at Rome. The means employed in that work are shewn in detail, in engravings, dated 1586, in the possession of Mr. Allen, at the New Houses of Parliament, and they are described with many other methods of using square timber scaffolding for external and internal constructions in the "Contignationes, ac pontes Nicolai Zabaglia una cum quibusdam ingeniosis praxibus, ac descriptione translationis obelisci Vaticani, aliorumque, per Equitem Dominicum Fontana susceptæ. Romæ, 1743."

† In the "Drawings of the London and Birmingham Railway, by J. C. Bourne" (Ackerman and Co.), two views are given of this scaffolding.

scaffolding, only one man had been killed. That accident occurred at the Woolwich Graving Dock, when a man was thrown from the travelling carriage by the handle of the winch striking him, from his having omitted to put on the break.

He believed, that this description of scaffolding might be safely carried still higher than at the Nelson Column, for although before the statue was hoisted, he had felt somewhat anxious, and had thought of attaching guide chains, and using other precautions, the fabric had stood so well, that he should not now hesitate to go to a greater height, relying upon the scaffolding alone.

Mr. C. H. Smith had adopted the system of the travelling winch on a framing, with great advantage in his carving room, for moving the heavy blocks of stone, from which the capitals of the columns for the Royal Exchange were cut. Without such mechanical assistance, he could never have executed his task within the required time, nor could the capitals have been raised and placed on the carriages, to be conveyed away, without much danger of injury.

Mr. Giles said, that Corby Bridge, over the Eden, on the line of the Newcastle and Carlisle Railway, was built by Mr. Denton, the contractor, by means of whole timber scaffolding put together in three stages. The bridge consisted of five arches, of 80 feet span each, 100 feet in height, and contained 400,000 feet of stone-work, which was executed with the greatest facility, chiefly owing to the convenience afforded by the scaffolding, and without any accident, excepting to the foreman, who fell twice from a considerable height, but fortunately was not killed.

Mr. Fowler said, that the scaffolding at the Cathedral at Cologne was of whole timber; there was little doubt, that the system was very similar to that which was employed when the building was commenced, in 1248. The crane which was used in raising the materials still remained on the summit of one of the towers; it was once removed, but was speedily restored to its situation, as the superstitious fears of the inhabitants of Cologne were excited by the occurrence of a storm immediately consequent upon the removal of the crane. It had subsequently been constantly repaired as it decayed, so that at present little of the original remained, but the form was still the same. He believed, that the materials for the York Column (Carlton-terrace) were raised by a kind of travelling carriage, on the top of the scaffolding.

Mr. Hawkins observed, that the scaffolds used at Vienna, for the erection of any building of importance, were always constructed of whole timbers, secured together by 'dogs.' In 1827 he superintended the erection of an extensive sugar-house at Vienna, where such scaffolding was used.

Mr. Colthurst stated, that at Devonport there was a column built of granite from Holman's Hill Quarry, near the Tamar. The shaft was 11 feet in diameter; its height, from the bottom of the shaft to the top of the capital was 65 feet 4 inches. The total height of the column, with its inferior and crowning pedestals, was 101 feet 4 inches. Its height above the street, including the rock on which it stood, was 124 feet. The abacus of the capital was composed of four stones, each weighing between 3 and 4 tons.*

The stones of the column were raised and set, entirely without the use of scaffolding, by means of a series of tall spars joined together (Fig. 2); the lowest, being fixed into the ground and braced by diagonal pieces, was lashed and strutted to the lower part of the shaft. A gaff, with a jaw at the lower end, was then slung in the throat by a strong rope or chain, so as to work round the upright spar, in the jaw prepared for this movement; from the end of the gaff, blocks and a fall were suspended, in such a manner as to command every part of the work, by raising or depressing the point of the gaff, to increase or diminish its range. Crab winches sufficed to raise the stones; and it was stated that the work was executed in a very short time.

Mr. Rendel had seen this column while in course of construction; the derrick appeared to act well, and it was certainly a cheap mode of raising the materials.

* Vide "The Public Buidings erected in the West of England;" by John Foulston. 4to. 1838, pp. 57 and 59.

Mr. Smith said, that in a recent visit to Liverpool, he had observed an ingenious mode adopted by Mr. Tomkinson for raising building materials, which almost superseded the use of external scaffolding. It consisted of a very high double "derick" placed upon wheels running on a tramway laid parallel with the walls of the building; the head of the derrick curved over towards the wall, and steam power was employed for raising the materials, which appeared to be accomplished with rapidity.

The president remarked, that the institution always viewed with pleasure papers descriptive of the methods adopted by contractors in the execution of works designed by civil engineers or architects. The profession was much indebted to the practical skill and intelligence of the contractors, and it would be extremely interesting to find recorded in the "Minutes of Proceedings" of the institution the names of the inventors, and the dates of the introduction of such ingenious modes of accomplishing works of magnitude as had been described by Messrs. Grissell and Peto. This could only be arrived at by either the engineers or contractors sending the necessary information, or by their giving it during the discussions at the meetings.

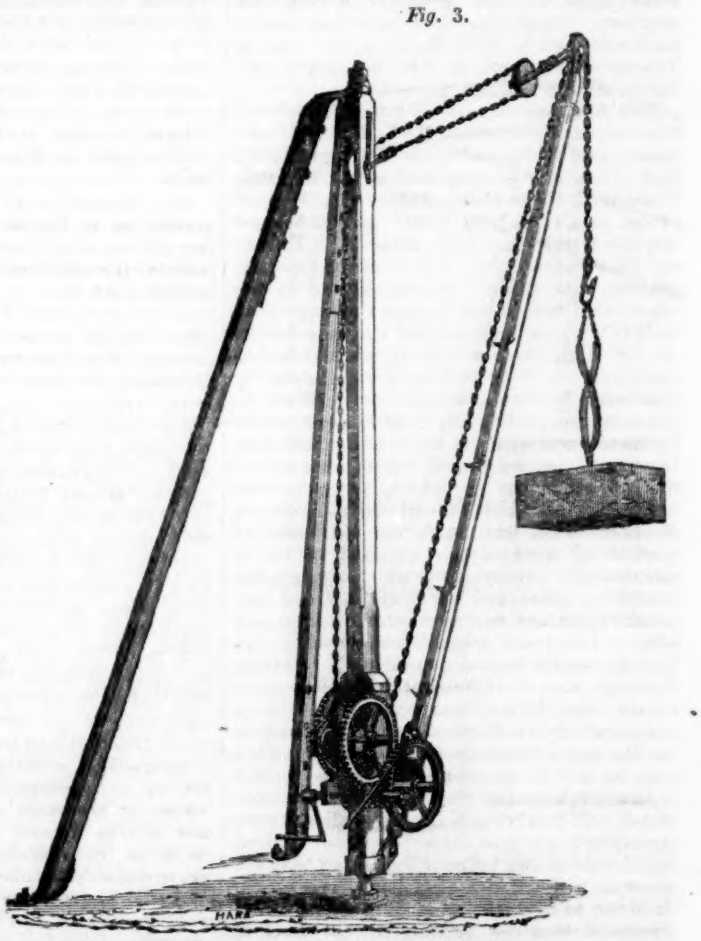
General Pasley described the method adopted by Mr. T. Slacks (Langholm), for building the obelisk which was erected on the Whitaw, Eskdale, to the memory of the late Major-General Sir John Malcolm, a native of that district.*

The obelisk, which was of white sand-stone, was carried up to the height of 100 feet above the foundation; it was built hollow, with thorough courses at intervals; through the centre of each of these courses was left a circular hole. In the lower of these holes was placed the foot of a pole 40 feet long and 10 inches diameter; the next hole above served as a stay, whilst the upper one supported the whole weight, as around the poles was firmly fixed a collar of hard wood. Beneath this collar 17 metal balls, 3¼ inches in diameter, were introduced, which, running in corresponding circular grooves in the collar and the thorough course, enabled the pole to revolve easily. Across the top of the pole was mortised a beam 12 feet long and 12 inches square, in the form of the letter T, and it was strengthened by diagonal iron braces and straps. By means of a crab winch with a rope passing over pulleys in each end of the transverse beam, the stones, were raised to the requisite height, and by a traversing carriage on the beam, a small crab, and the pulleys, the stone was enabled to run inwards to the spot for laying it. The crane was raised as each bond or thorough course was fixed, and the time consumed in the operation of moving it did not exceed two hours.

This crane had been found very efficient, and had greatly reduced the cost of building the obelisk, which was completed in less than twelve months. For the ingenuity displayed in this simple modification of the balance crane used by Mr. Stevenson, at the Bell Rock Lighthouse, and for a clever hanging scaffolding used for completing the pyramidal top of the obelisk, the gold Isis medal was voted to Mr. Slack, by the Society of Arts, in 1836-7.

A model was exhibited of a moveable derrick crane (Fig. 3), which had been presented by Mr. Howkins. It was used by Mr. Wightman at the works of the Granton Pier, Edinburgh, and was stated by him to be very superior to any other kind of crane. It consisted of a vertical post, supported by two timber backstays, and a long moveable jib, or derrick, which was hinged against the post, below the gearing; this jib was held by a chain, passing from a barrel over a pulley at the top of the post, in such a manner that the extreme end of the jib could be raised almost vertically, or be lowered nearly to a horizontal position.

Fig. 3.



Derrick crane used at Granton Pier (Edinburgh).

The chief advantage it possessed over the old gibbet crane, was, that it commanded concentric circles of from 10 feet to 60 feet radius, which was of great use in large works, as it could extend its sweep over a circle of 120 feet diameter, without being moved from its position; whereas, the old gibbet crane commanded only one circle of comparatively limited extent, and in moving it, as the works proceeded, there was a considerable loss of time.

Mr. Bremner stated, that he had seen the crane at Granton Pier; it was a very useful machine, and the only fault he could find with it, was, that in an exposed situation, there was a risk of the wheel-work being destroyed. He believed, that the contractors had found much advantage from its use.

Mr. Bremner had used, at the works of Lossiemouth Harbour, a crane of a somewhat similar description. The jib was composed of two spars, with the hoisting-chain working between them; the radius of its sweep was 60 feet, so that any spot, within a circle of 120 feet in diameter, was fully commanded by it, and that extent of work could be completed without moving the crane.

Mr. Gale presented two drawings of improved moveable jib-cranes, the alterations in which had been suggested by the serious accidents which had occurred from the failure of the ordinary cranes.

On investigating the circumstances connected with these accidents, he found that in general they had arisen from the snapping of the jib-chain. After numerous experiments, it occurred to him that this defect might be obviated by attaching the jib-chain to the top of the post, instead of fixing it to the end of the jib: this alteration was productive of great

* Vide Trans. Soc. Arts, 1836-7, vol. li., page 78.

advantage; the strain was found to be less than one-half that of the single jib-crane, and it consequently required fewer men to work it.

He had also applied a rope instead of a chain for working the jib, as it was preferred by some builders, and he had also made some minor improvements in the other parts of the cranes.

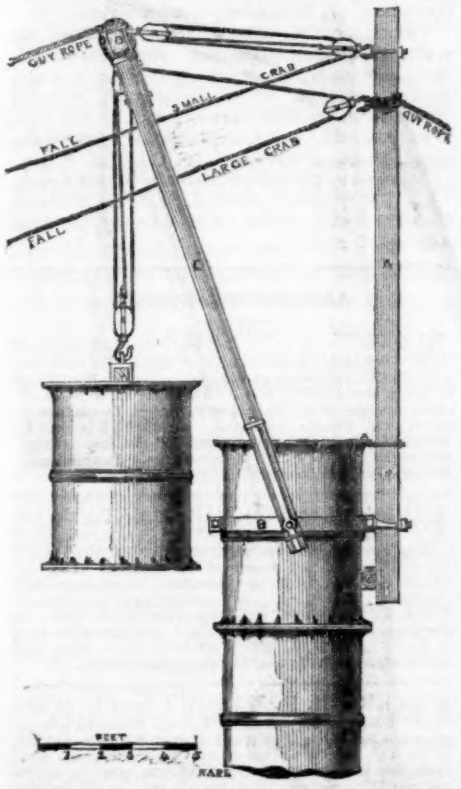
These kind of cranes were, he believed, introduced by Mr. W. York, at Glasgow, in the year 1833, and Mr. Gale had used the improved sort in 1842, at the erection of the New Court Houses, Glasgow. Since that time many builders had adopted them, and their advantages were becoming daily so evident, that he would send, early in the ensuing session, a paper descriptive of them.

Mr. Thomson believed, that cranes of this description were first used at Glasgow by builders. The contractor for the Grangemouth Docks, under Sir John Macneil, employed them in 1841 and 1842 with much advantage; he thought them the most useful kind of cranes for general work.

The President agreed in the opinion of the general utility of the cranes; he had been so pleased with them, that he requested Mr. Howkins to present to the Institution the model of that used at Granton Pier. With respect to the date of the introduction of the swinging-jib, or moveable derrick crane, it was used at Granton Pier by Messrs. Orrell, of Liverpool, in 1838, and he believed, that it had been commonly used by them for some time previously.

Mr. Wicksteed presented a drawing of the tackle used in elevating pipes of the "stand-pipe" of the East London Waterworks (Fig. 4). A piece of timber (A),

Fig. 4.



Tackle used in elevating the pipes of the "Stand-pipe" at the East London Water-works.

9 inches square, was attached vertically to the upper flanch of the pipe, and held below by an iron girdle (B), which encircled the body of the pipe; guy ropes were attached to the top of the upright, which served as the points of suspension for the snatch blocks, through which were passed the fall ropes from the large and the small crab winches. The iron girdle had at its opposite sides two pivots, which traversed the lower end of two timber jibs (C), connected at their upper ends by a cross piece (D), from the centre of which were suspended the blocks and tackle connected with the large crab, by which the pipes were raised. When each pipe had arrived at its height, the jib frame was drawn up vertically by the tackle from the small crab, and the pipe was lowered to its position; the pins were put into the flanches, and the whole apparatus was raised and attached to it, in order to use it for raising the next pipe. This process was repeated until the stand-pipe was finished at a height of upwards of 130 feet. It was stated to be a very simple and economical mode of proceeding.

Correspondence.

TUBULAR CHIMNEY-FLUES.

SIR,—Observing in THE BUILDER a controversy respecting tubular chimney-flues, I beg to acquaint you that tubular chimney-flues were introduced here at Abbotsford, by John and Thomas Smith, of Darnick, in the year 1822, and I never saw or heard of them before that time.

Their flues were in pieces of 12 inches high, and from 9 to 15 inches diameter inside. They were made of a mixture of fine clay and common clay, about 1¼ inch thick. To form the inflections, they were made a little off the square on one end, so that when put together, they formed a curve.

Since that time these flues have been very much used in this neighbourhood.—I am, Sir, your most obedient servant,

A CONSTANT READER.

Melrose, 10th January, 1845.

THE WINDOW-TAX.

SIR,—I have just made a Venetian window of three lights, divided by two 1½ inch mullions, for which the opening between the outside brickwork of the whole window is 4 feet 9 inches. The boxings are placed in the usual way in the reveals, and the window frame is seen on the inside, and makes the window there, including the frame, more than 5 feet 6 inches wide. The height of the whole frame, including head and cill, is 7 feet 6 inches.

Is such a window liable to be charged as a *double* light under the Window-tax Acts? And if so, *why?*—Your answer will oblige,

A JOINER.

Oswestry, Jan. 13, 1845.

[Windows above 4 feet 9 inches in width between the reveals, are charged as double lights; except in shops, workshops, and warehouses, or in the public room of any house licensed to sell liquors by retail or in farmhouses especially exempted from the duties on houses.—ED.]

BLISTERS IN LIME.

SIR,—May I beg the favour of inserting the following in your excellent journal, THE BUILDER:—

I shall be obliged by any one of your readers informing me whether a lime which is subject to blister and crack can by any means be prepared or mixed with any other material so as to prevent such mishaps.—Your most obedient servant, W. S. S.

[Is the lime in question properly prepared? Blisters usually result from the lime not being thoroughly slaked before it is used. Some limes crack in drying, when slaked with too much water. They cannot combine with the fluid, and when this is withdrawn by evaporation, shrinkage takes place.—ED.]

MODEL (?) HOUSES, PENTONVILLE.

SIR,—The public is much indebted to you for your comments on the so-called model houses in the Bagnigge-wells-road. Pray do not relax in your efforts to effect an alteration in them. The present plan is perfectly preposterous.—Your obedient servant.

A MEMBER OF THE SOCIETY.

[We shall not fail to return to the subject shortly.—ED.]

ANOTHER FIRE FROM OVER-HEATED FLUE.—On Tuesday night, shortly after 10 o'clock, police constable Reeve, perceiving smoke issuing from the lower part of the extensive premises in the occupation of W. Thomas and Brothers, 128 and 129, Cheapside, gave an immediate alarm to the engine station at Watling-street. Mr. Braidwood and two engines from that establishment were soon upon the spot, and upon an entrance being effected, it was discovered that the flue of the apparatus for warming the premises had been over-heated, and was communicating with the timbers of the flooring underneath the shop. The discovery was most opportune; as it is, however, considerable injury is done by smoke and water.

Miscellanea.

WAREHOUSING.—There is now a warehouse in the course of erection in Manchester which seems deserving of especial notice on account of its extent, as well as its mode of construction. It is the property of Messrs. Philips, and Co., the oldest, wealthiest, and certainly the most respectable firm within the borough. Its site is in Church-street, and adjoining their present large establishment. Its basement story is equal to that of Messrs. Watts, within a few superficial yards. The area of the various floors will be within a shade of a statute acre, whilst the entire concern would cover over two statute acres. The building is to be completely fire-proof; not an inch of timber will, it is said, be used in its construction. It is built of the best stock dressed brick, and instead of plastering the inner walls, the inside brick-work will be faced with dressed stock-brick, similar to the outside, with this difference, however, that the inside facing will be laid in Roman cement, thus making the inner walls impervious to damp—a great desideratum in a *haberdashery* concern like this. It is somewhat singular that the Messrs. Philips should have been the first to introduce fire-proof cotton-mills—the first, too, to introduce gas into a cotton-mill, which was effected in 1801-2, to a large extent,—and also to be the first to build a fire-proof warehouse, for the first it will be in Manchester, that has been erected for the sale of goods only.—*Doncaster Gazette.*

WILTON.—We understand that the internal decoration of the church building at Wilton, at the expense of the Hon. Sydney Herbert, M.P., is to be completed by Mr. Willement, in the style of the Temple church. We believe Mr. Boxall had been engaged upon it; but now decorative painting is to be preferred to designs of a higher character.—*Historical Register.*

MOVING BRICK HOUSES.—The *Boston Daily Advertiser* of the 20th ult says, "A very neat and successful operation was performed in Lincoln-street, in the removal of a block of two large three-story brick dwellings a distance of some 10 or 15 feet, for the widening of the street. The new foundation for the houses had been of course previously prepared, and the houses themselves were placed on a sort of railway, preparatory to their removal. The movement was effected by means of jack-screws, acting in a horizontal direction. The construction of the tracks or ways was novel and extremely simple. They consisted of double lines of cast-iron plates, inserted between the foundations of each of the walls of the building itself; and for wheels, or rollers, cannon balls of equal size were placed between the two lines of plates—the upper plates being inverted. As the foundations of these ways consisted of the original foundation of the building, there could of course be no hazard of yielding, as the whole building rested on walls of equal size: it was moved without any dislocation or cracking of the walls in any part, or of the finishing. The operation of removing the building was performed under the direction and superintendence of Mr. Preston, of the Board of Aldermen, and has been accomplished with entire success. We understand, also, that it has been done at a very moderate expense, compared with the advantage gained of placing the whole edifice on its new foundation without the slightest injury, and without hazard of serious accident."

FIRE-PROOF CONSTRUCTION.—At the conclusion of the inquest on the bodies of the sufferers in the late fire in Guildford-street, and before the jury separated, Mr. Geary, the architect, exhibited the model of a house, which he said was so far fire-proof as to ensure the saving of life. Its chief merits consisted in brick partition-walls, instead of lath and plaster, and in having the panels of the doors of sheet-iron. This confined the fire in whatever room it occurred. He stated, that this mode of building was not more expensive than the lath and plaster one usually pursued in London.

IMPROVED SYSTEM OF DRAINAGE.—It is so currently reported and believed that Government, during the approaching session, intend to introduce a Bill for the improvement of the system of draining towns, that, in some instances, works, which otherwise would have been commenced, have been postponed.

ARCHITECTURE AT KING'S COLLEGE.—Professor Hosking will resume his course on the arts of construction on Friday, the 24th, at 4 o'clock, and will continue it at the same time on every succeeding Tuesday and Friday throughout the term. We hope to find it well attended.

VACANT CHAIR AT UNIVERSITY COLLEGE.—The professorship of civil engineering at this college being vacant, candidates are requested to send in applications and testimonials on or before Friday, the 14th of February.

PUBLIC PARKS.—The subscription in Manchester for public parks, &c., now amounts to nearly 30,000*l.*

THE IRON TRADE.—This important branch of our manufactures is in the most thriving condition which its best friends could wish. We noticed an increase of 10s. per ton on manufactured iron in the early part of last month. On Friday, the usual preliminary meeting of iron masters was held at Dudley, in order to fix the prices of iron for the ensuing quarter-day, when a further increase of 10s. per ton was agreed upon. The Great North of England Railway Company's contract for 6,000 tons of rails has been taken by the Bishopwearmouth Iron Company, at Sunderland, and Messrs. Blockow and Vaughan, of Middlesbro' Ironworks, at 7*l.* 15s. per ton, which is a considerable advance on the late quotations.—*Bristol Journal*, Jan. 4.

NOTICES OF CONTRACTS.

For the erection of a Wesleyan Chapel at Hythe.—Mr. T. Pilcher, Stationer, &c., Hythe. January 21.

For making a Sewer in the town of Cambridge. The sewer to be cylindrical, and 2 feet diameter in the clear, the length will be about 385 yards, and the average depth about 9 feet.—Frederick Randall, Town Hall, Cambridge. January 21.

For Warming and Ventilating the new Buildings of the Suffolk Lunatic Asylum; and for fitting up the laundry with Drying Apparatus, upon the most approved plans.—John Henry Borton, Milton, Suffolk. January 21.

For the Erection of Stone Booking-offices at Ashton and Stalybridge Stations; and for the Erection of a Station at Sheffield for the Sheffield and Manchester Railway Company. January 21.

For supplying the East-India Company with Tin Plates.—J. D. Dickinson, Dep. Sec., East-India House. January 22.

For the erection of the Railway Works between Leeds and Bradford, including fencing, earthwork, masonry, roads, and permanent way.—William Clarke, Secretary, Hunslet-lane Station, Leeds. January 27, 1845.

For the erection of a New Pauper Lunatic Asylum at Clifton, near York.—Messrs. Scott and Moffatt, Architects, 20, Spring Gardens, London; or Mr. J. Holtby, Low Ousegate, York. January 28.

For the execution of Works on the Chester and Holyhead Railway.—1st. A distance of eight miles, or thereabouts. 2nd. A distance of twenty-two miles, or thereabouts. 3rd. A Tunnel through the promontory of Penmaen Back, near Conway.—George King, Secretary, 62, Moorgate-street. January 29, 1845.

For the Execution of Works on that part of the Blackburn and Preston Railway extending from Blackburn to Pleasington, being about 3½ miles in length.—Peter Sinclair, Secretary, Blackburn. January 29.

For the supply of Wrought Iron Rails and the requisite number of Chairs for about 15 miles of the Southport and Euxton Junction Railway. The weight of rails to be from 60lb. to 70lb. per lineal 2 yards and 15 feet lengths, equal to from 1,500 to 1,800 tons of wrought iron, and about one-third of that quantity of cast iron.—Woodcock and Part, Solicitors, Wigan. January 31.

For erecting the Works of the third division of the Main Line of the Great Southern and Western Railway, being 11 miles, 6 furlongs, and 75 yards in length. Also for the first division of the Carlow branch, being 10 miles, 7 furlongs, and 160 yards; comprising excavation, embankments, bridges, culverts, &c.—William Taylor, Secretary, 3, College Green, Dublin. February 1.

For the formation of 4 Miles 56½ Chains (single line) of the Ashton, Stalybridge, and Liverpool Junction Railway.—John Jellecorse, Secretary of the Manchester and Leeds Railway Company, Palatine Buildings, Hunt's Bank, Manchester. February 3.

For the erection of Alms' Houses in Foundation-street, Ipswich.—Mr. J. M. Clark, Brook-street, Ipswich; or Mr. Notcutt, Solicitor, Ipswich. February 1.

For the erection of a Bridge, called White Bridge, at Grasmere, near Ambleside, Westmoreland.—Mr. George Robinson, Bridge Surveyor, Kendal; or Mr. Daniel Donaldson, Ambleside. February 4.

For the construction of the several Stations and other Buildings on the York and Scarborough Railway.—Mr. Andrews, Architect, York; or Mr. George Baker, Secretary, Railway Office, York. February 5.

For the erection of a Steam Boat Pier at the Quay on the north-east side of Blackfriars' Bridge, also for building a Decked Lighter or Dumby.—Town Clerk's Office, Guildhall. February 6.

For erecting and completing the Lower Sluice and Sluice-Pit at the top of the Eau, Brink Cut, about 4 miles above Lynn.—Messrs. Walker and Burges, 23, Great George-street, Westminster; or Mr. George Game Day, Clerk to the Middle Level Drainage Commissioners, St. Ives. February 10.

For the erection of New Buildings in Pembroke College, Oxford.—Plans, &c., prepared by Mr. Haywood, Architect, may be seen at the Master's House. February 11.

For the supply of 11,000 feet of nine-inch cast-iron Pipes for a new line of Aqueduct to be laid in the Island of Malta.—Vin. Casolani, Collector of Land Revenue, Office of Land Revenue and Public Works, Valletta, Malta. March 31, 1845.

COMPETITIONS.

Plans and estimates are required for a Pauper Lunatic Asylum for the County of Somerset; the building to accommodate 300 patients, and to contain two Stories. The Committee of Visiting Magistrates wish it to be of a plain, cheerful character, but will not further fetter the architect by suggesting any particular arrangement as to the interior, its ventilation, warming, or otherwise. The ground selected contains 36 acres.—The Clerk of the Peace, Taunton. A Premium of 100*l.* will be adjudged for the best plan, and 50*l.* for the next best. January 22.

The Committee for Building a Chapel at Holloway are desirous to receive Designs for their intended building. The style to be Gothic. The Committee pledge themselves to select for their Architect the gentleman whose design they shall prefer.—George Brooks, Esq., 1, Lansdowne-place, Holloway. January 31.

Plans and estimates are required for a Workhouse, to contain about 1,180 persons. The whole to be done in a plain and substantial manner, without any expensive embellishments. The plans and architects' estimates to be sent to Robert Mercer, the Clerk of the Clifton Union, Pennywell Road, Bristol, on or before the 17th of February next, and the Board of Guardians will adjudicate on the 28th. The architect producing the best plan in the estimation of the Board will be employed at a sum not exceeding 5 per cent. on the outlay, and a gratuity of 25 guineas will be given to the architect producing the second best plan in the opinion of the Board.

APPROACHING SALES OF WOOD, &c.

BY AUCTION.

January 22.—At Oakwood Farm, Radwinter, Essex; 175 Oak Trees, of good dimensions.—Mr. Martin Nockolds, Auctioneer, Saffron Walden, Essex.

January 24.—At the Methuen Arms Inn, Corsham, Wilts; 399 Oak, Ash, Elm, Beech, Walnut, and Apple Trees, most of them of unusual large dimensions, and clean, straight, and lofty growth.—Messrs. Giller and Son, auctioneers, Corsham.

February 25.—At the King's Arms Inn, Hemel Hempstead; a large Fall of capital Oak, Ash, Elm, and Beech Timber Trees, the greater portion of which are of very large dimensions and superior quality.—Mr. James Adams, auctioneer, Clarence-street, Staines, Middlesex.

*** The Sale at Elmer Farm, noticed in our last number, is postponed for a short time. Due notice will be given of the day when it will take place.

TO CORRESPONDENTS.

"A Young Architect (Sheffield)."—*The Wesleyan Chapel at Battersea is hardly commenced. The architect is Mr. Andrew Trimen, the contractor Mr. John Sugden.*

"T. M. O." *asks us which is the best office in which to effect an insurance against fire. There are so many good offices, it would be invidious to name one. The Alliance, the Phœnix, the Sun, &c. are equally respectable.*

"C. P." *is thanked for his drawing of the Doorway to Hedingham Castle. He will do better before long.*

"W. C. P."—*The height of the nave of the Church of St. Vincent de Paul, as stated in our article headed "Church Architecture in Paris" (p. 3), is quite correct, great as it may seem, namely, 96 feet. The portico is lower than the body of the church. We have not the dimensions of it, but should estimate its extreme height at about 70 feet. The quotation alluded to is from a description of the church, published with the sanction of the architect, M. Hittorff, "Au Bureau de l'Illustration," Rue Richelieu, Paris,* 1844.

"Mr. Rogers" *is thanked; we were not able to avail ourselves of the information.*

"T. and W. Stirling."—*Received.*

"Rusticus."—*The Act cannot be obtained till the opening of Parliament.*

"H. S." *will appear.*

"Architectural Draughtsmen's Society."—*The place of meeting is No.* 33, *Southampton-street, Strand.*

"F. C. M. S." *asks which is the best "Builder's Price-book." We would recommend Laxton's.*

ERRATUM.

St. Paul's Church, Herne Hill.—In our account of this church, p. 2, the sentence, "The building consists of a nave and side-aisles, *or* chancel," should be, "The building consists of a nave and side-aisles *with* chancel.

MEETINGS OF SCIENTIFIC BODIES

During the ensuing week.

MONDAY, January 20.—*Statistical*, 11, Regent-street, 8 P.M.; *Chemical* (Society of Arts), Adelphi, 8 P.M.; *Medical*, Bolt-court, Fleet-street, 8 P.M.

TUESDAY, 21.—*Civil Engineers*, 25, Great George-street, 8 P.M. (Anniversary); *Linnæan*, Soho-square, 8 P.M.; *Horticultural*, 21, Regent-street, 2 P.M.

WEDNESDAY, 22.—*Society of Arts*, Adelphi, 8 P.M.; *Geological*, Somerset-house, 8½ P.M.; *Pharmaceutical*, 17, Bloomsbury-square, 9 P.M.

THURSDAY, 23.—*Royal*, Somerset House. 8½ P.M.; *Antiquarian*, Somerset House, 8 P.M.; *R.S. Literature*, 4, St. Martin's-place, 4 P.M.; *Medico-Botanical*, 32, Sackville-street, 8 P.M.; *Numismatic*, Somerset House, 7 P.M.

FRIDAY, 24.—*Royal Institution*, Albemarle-street, 8 P.M.; *Philological*, 49, Pall Mall, 8 P.M.

SATURDAY, 25.—*Royal Botanic*, Regent's-park, 4 P.M.; *Westminster Medical*, 32, Sackville-street, 8 P.M.; *Inst. of Fine Arts* (Society of Arts, Adelphi), 8 P.M.

ADVERTISEMENTS.

NOTICE.—INVENTORS desirous of obtaining LOANS ON or of SELLING their INVENTIONS, or Patents, should apply to Mr. M. JOSCELIN COOKE, at the OFFICE for PATENTS, 20, Half Moon-street, London, where English and Foreign Patents are obtained, and Designs registered. An INDEX is kept for inspection of all Patents granted for the last century; also copies of every Patent of importance. Instructions to Inventors and a list of charges gratis on application.

EMBARRASSED CIRCUMSTANCES.—PERSONS IN DIFFICULTIES being desirous of availing themselves of the Benefit of LORD BROUGHAM'S HUMANE ACT, are requested to apply to MESSRS. GRAND & CO., of Moira Chambers, Ironmonger-lane, Cheapside, where every information may be obtained, FREE OF EXPENSE, or arrangements can be made with Creditors, by which means the painful necessity of resorting to BANKRUPTCY or INSOLVENCY may in many cases be avoided.—N.B. Partnership accounts adjusted.

OKER.—B. R. WRIGHT begs to inform Builders, Paperstainers, and the Trade in general, the prices for Native Oxford and Washed STONE OKERS, at his Oil and Colour-warehouse, 27, Castle-street East, Oxford-street:—Native Oxford Oker, 21s. per cwt, or 18*l.* per ton; Washed Stone Oker, 14s. per cwt., or 12*l.* per ton. A liberal discount to the trade. A Porter and Grinder wanted.

MOREWOOD'S PATENT GALVANIZED TINNED PLATES.—PATRONIZED by the ADMIRALTY and the HONOURABLE BOARD of ORDNANCE, being extensively used in HER MAJESTY'S DOCK-YARDS, at the TOWER, and elsewhere, for every variety of ROOFING, and other purposes, where a strong, light, cheap, and durable material is required. It has been found by experience that this article is beyond all comparison superior to zinc, possessing, as it does, all the advantages arising from the strength and firmness of iron, combined with perfect immunity from rust; whilst it is free from the very serious objection, which applies to zinc, viz. its contraction and expansion, consequent upon every change of temperature, and from which circumstance leakage must of course result. This material is not likely to be destroyed by fire, as is the case with zinc and lead, which melt and run down, thus freely admitting fresh air to the fire, and causing it to burn more fiercely. It is, therefore, obviously well adapted for all the purposes above named, and most importantly so, when there is the possibility of fire. It is also peculiarly suitable for chimney-tops, gutters, spouting, and out-door work generally, possessing the strength of iron without its liability to corrosion. It is by far the most economical metal roofing that can be obtained, in consequence of its strength, as it may be laid without boards, and upon the lightest rafters. This mode of preserving metal from rust does not only apply to sheet-iron but also to manufactured iron in any form, as bolts, nuts, hinges, nails, &c. &c. S. HOLLAND, 34, GRACECHURCH-STREET.